AS FILED WITH THE SECURITIES AND EXCHANGE COMMISSION ON MARCH 10, 2000

REGISTRATION NO. 333-

SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM S-1

REGISTRATION STATEMENT

UNDER

THE SECURITIES ACT OF 1933

SONUS NETWORKS, INC.

(Exact name of registrant as specified in its charter)

DELAWARE	3342	04-3387074
(State or other jurisdiction of incorporation or organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification No.)

5 CARLISLE ROAD, WESTFORD, MASSACHUSETTS 01886
(978) 692-8999
(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

HASSAN M. AHMED
PRESIDENT AND CHIEF EXECUTIVE OFFICER
SONUS NETWORKS, INC.
5 CARLISLE ROAD
WESTFORD, MASSACHUSETTS 01886
(978) 692-8999
(Name, address, including zip code, and telephone number, including area code, of agent for service)

COPIES TO:

DAVID L. ENGEL, ESQ. JOHAN V. BRIGHAM, ESQ. BINGHAM DANA LLP 150 FEDERAL STREET BOSTON, MASSACHUSETTS 02110 TELEPHONE (617) 951-8000 TELECOPY (617) 951-8736	DAVID C. CHAPIN, ESQ. ROPES & GRAY ONE INTERNATIONAL PLACE BOSTON, MASSACHUSETTS 02110 TELEPHONE (617) 951-7000 TELECOPY (617) 951-7050

APPROXIMATE DATE OF COMMENCEMENT OF PROPOSED SALE TO PUBLIC: As soon as practicable after the effective date hereof.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act, check the following box. / /

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. / / _____

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration number of the earlier effective registration statement for the same offering. / / _____

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration number of the earlier effective registration statement for the same offering. / / _____

If delivery of the Prospectus is expected to be made pursuant to Rule 434, please check the following box. / /

CALCULATION OF REGISTRATION FEE

	PROPOSED MAXIMUM

TITLE OF EACH CLASS OF SECURITIES TO BE REGISTERED	AGGREGATE OFFERING PRICE(1)	AMOUNT OF REGISTRATION FEE(2)
Common Stock, $0.001 par value per share.....	$115,000,000	$30,360

(1) Estimated solely for the purpose of calculating the amount of the registration fee pursuant to Rule 457(o) under the Securities Act of 1933, as amended.

(2) Calculated pursuant to Rule 457(a) based on an estimate of the proposed maximum aggregate offering price.

THE REGISTRANT HEREBY AMENDS THIS REGISTRATION STATEMENT ON SUCH DATE OR DATES AS MAY BE NECESSARY TO DELAY ITS EFFECTIVE DATE UNTIL THE REGISTRANT SHALL FILE A FURTHER AMENDMENT WHICH SPECIFICALLY STATES THAT THIS REGISTRATION STATEMENT SHALL THEREAFTER BECOME EFFECTIVE IN ACCORDANCE WITH SECTION 8(A) OF THE SECURITIES ACT OF 1933 OR UNTIL THE REGISTRATION STATEMENT SHALL BECOME EFFECTIVE ON SUCH DATE AS THE COMMISSION, ACTING PURSUANT TO SAID SECTION 8(A), MAY DETERMINE.

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\ SUBJECT TO COMPLETION, DATED MARCH 10, 2000.

THE INFORMATION IN THIS PRELIMINARY PROSPECTUS IS NOT COMPLETE AND MAY BE CHANGED. THESE SECURITIES MAY NOT BE SOLD UNTIL THE REGISTRATION STATEMENT FILED WITH THE SECURITIES AND EXCHANGE COMMISSION IS EFFECTIVE. THIS PRELIMINARY PROSPECTUS IS NOT AN OFFER TO SELL NOR DOES IT SEEK AN OFFER TO BUY THESE SECURITIES IN ANY JURISDICTION WHERE THE OFFER OR SALE IS NOT PERMITTED.

SHARES

[LOGO]

COMMON STOCK

This is an initial public offering of shares of common stock of Sonus Networks, Inc. All of the shares of common stock are being sold by Sonus Networks.

Prior to this offering, there has been no public market for the common stock. We have applied to list our common stock on the Nasdaq National Market under the symbol "SONS". It is currently estimated that the initial public offering price per share will be between $ and $.

SEE "RISK FACTORS" BEGINNING ON PAGE 4 TO READ ABOUT FACTORS YOU SHOULD CONSIDER BEFORE BUYING SHARES OF THE COMMON STOCK.

NEITHER THE SECURITIES AND EXCHANGE COMMISSION NOR ANY OTHER REGULATORY BODY HAS APPROVED OR DISAPPROVED OF THESE SECURITIES OR PASSED UPON THE ACCURACY OR ADEQUACY OF THIS PROSPECTUS. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

	Per Share	Total
Initial public offering price	$	$
Underwriting discount	$	$
Proceeds, before expenses, to Sonus Networks	$	$

To the extent that the underwriters sell more than shares of common stock, the underwriters have the option to purchase up to an additional shares from Sonus Networks at the initial public offering price less the underwriting discount.

The underwriters expect to deliver the shares against payment in New York, New York on , 2000.

GOLDMAN, SACHS & CO.

DAIN RAUSCHER WESSELS

J.P. MORGAN & CO.

ROBERTSON STEPHENS

Prospectus dated , 2000.

PROSPECTUS SUMMARY

YOU SHOULD READ THE FOLLOWING SUMMARY TOGETHER WITH THE MORE DETAILED INFORMATION REGARDING US, THE COMMON STOCK BEING SOLD IN THIS OFFERING AND OUR FINANCIAL STATEMENTS, INCLUDING THE NOTES TO THOSE STATEMENTS, APPEARING ELSEWHERE IN THIS PROSPECTUS. UNLESS OTHERWISE INDICATED, THIS PROSPECTUS ASSUMES:

- THE CONVERSION OF OUR OUTSTANDING SHARES OF REDEEMABLE CONVERTIBLE PREFERRED STOCK INTO AN AGGREGATE OF 32,319,074 SHARES OF COMMON STOCK UPON THE CLOSING OF THIS OFFERING; AND

- THAT THE UNDERWRITERS DO NOT EXERCISE THEIR OPTION GRANTED BY US TO PURCHASE ADDITIONAL SHARES IN THIS OFFERING.

ABOUT SONUS NETWORKS

We are a leading provider of voice infrastructure products for the new public network. Our hardware and software enable customers to deploy an integrated, packet-based network carrying both voice and data traffic. Our products combine the superior voice quality and high reliability characteristic of the traditional telephone network and the dramatically improved scalability, density and ease of deployment enabled by a packet architecture. Additionally, our products, which are interoperable with the global installed base of circuit-switched voice networks, provide a powerful and open software platform upon which next generation voice and data services can be designed.

We market and sell our products to service providers, including long distance carriers, wholesale carriers, competitive local exchange carriers, incumbent local exchange carriers, Internet service providers, cable operators and international telephone companies. Our customers include Global Crossing and Williams Communications, two of the world's leading service providers.

Two global forces--deregulation and the Internet--are expected to revolutionize the public telephone network worldwide. Deregulation has fueled intense competition among service providers and is driving them to seek new and innovative service offerings and the means to reduce their costs. The rise in Internet use has caused dramatic growth in data traffic. The traditional circuit-switched telephone network was not designed to carry data traffic, leading service providers to invest heavily in parallel, high-capacity, packet-based networks. With voice traffic carried over the vast installed base of traditional circuit-switched networks, and data traffic carried over rapidly expanding packet networks, service providers are faced with the expense and complexity of building and maintaining parallel networks. A significant opportunity exists to create a new packet-based public network capable of transporting both voice and data. Synergy Research Group projects that the market for voice infrastructure to enable just two applications for the new public network, voice over Internet protocol and Internet offload, will exceed $19 billion in 2003, up from virtually zero in 1999.

Our objective is to capitalize on our early technology and market lead and to build the premier franchise in voice infrastructure solutions for the new public network. The following are key elements of our strategy:

- leverage technology leadership to achieve key service provider design wins;

- expand and broaden our customer base by targeting specific market segments;

- expand our global sales, marketing, support and distribution capabilities;

- grow our base of software applications and development partners;

- leverage our technology platform from the core of the network out to the access edge;

- actively contribute to the standards definition and adoption process; and

- expand through investments in complementary products, technologies and businesses.

We sell our products through a direct sales force and resellers. In addition, we intend to establish relationships with selected original equipment manufacturers and other marketing partners to serve particular markets or geographies. We also collaborate with our customers to identify and develop new advanced services and applications that they can offer to their customers.

Our principal executive offices are located at 5 Carlisle Road, Westford, Massachusetts 01886, and our telephone number is (978) 692-8999. Sonus is a trademark and service mark of Sonus Networks. Each trademark, trade name or service mark of any other company appearing in this prospectus belongs to its holder. Information contained on our Web site WWW.SONUSNET.COM does not constitute part of this prospectus. We were incorporated as a Delaware corporation in August 1997.

THE OFFERING

Shares offered by Sonus Networks.....	shares
Shares to be outstanding after the offering (1).....	shares
Use of proceeds.....	For general corporate purposes, including working capital and capital expenditures.
Proposed Nasdaq National Market symbol.....	"SONS"

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(1) Based on the number of shares outstanding as of February 29, 2000. Excludes 1,692,099 shares of common stock issuable upon exercise of outstanding stock options. Includes 14,294,936 shares of restricted common stock, which are subject to our right to repurchase upon termination of employment.

SUMMARY FINANCIAL INFORMATION
(IN THOUSANDS, EXCEPT PER SHARE DATA)

The following table contains summary financial data which should be read together with our financial statements and related notes and "Management's Discussion and Analysis of Financial Condition and Results of Operations."

	PERIOD FROM INCEPTION (AUGUST 7, 1997) TO DECEMBER 31, 1997	YEAR ENDED DECEMBER 31, 1998	YEAR ENDED DECEMBER 31, 1999	PERIOD FROM INCEPTION (AUGUST 7, 1997) TO DECEMBER 31, 1999
STATEMENT OF OPERATIONS DATA:				
Revenues	$ --	$ --	$ --	$ --
Loss from operations	(486)	(7,228)	(24,374)	(32,088)
Net loss	(461)	(6,914)	(23,887)	(31,262)
Net loss applicable to common stockholders	(461)	(6,914)	(26,387)	(33,762)
Net loss per share (1):				
Basic and diluted	$ --	$ (4.27)	(5.53)	--
Pro forma basic and diluted			(0.75)	--
Shares used in computing net loss per share (1):				
Basic and diluted	--	1,619,289	4,774,763	
Pro forma basic and diluted			32,062,786	

The following table is a summary of our balance sheet as of December 31, 1999:

- on an actual basis;
- on a pro forma basis to reflect the sale in March 2000 of 1,509,154 shares of Series D redeemable convertible preferred stock at $16.40 per share and the conversion of all outstanding shares of our redeemable convertible preferred stock into 32,319,074 shares of common stock upon the closing of this offering; and
- on a pro forma as adjusted basis to give effect to the sale of the shares of common stock offered by this prospectus at an assumed initial public offering price of $ per share, the mid-point of the range set forth on the cover of this prospectus and after deducting underwriting discounts and estimated offering expenses.

	AS OF DECEMBER 31, 1999		
	ACTUAL	PRO FORMA	PRO FORMA AS ADJUSTED
BALANCE SHEET DATA:			
Cash, cash equivalents and marketable securities	$ 23,566	$48,276	
Working capital	19,604	44,314	
Total assets	30,782	55,492	
Long term obligations, less current portion	3,402	3,402	
Redeemable convertible preferred stock	46,109	--	
Total stockholders' equity (deficit)	(25,199)	45,620	

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(1) See note (1)(n) to our financial statements for an explanation of the method of calculation. Pro forma per share calculation reflects the conversion upon the closing of the offering of all the outstanding shares of Series A, Series B and Series C redeemable convertible preferred stock into shares of common stock, as if the conversion occurred at the date of original issue.

RISK FACTORS

THIS OFFERING INVOLVES A HIGH DEGREE OF RISK. YOU SHOULD CAREFULLY CONSIDER THE RISKS DESCRIBED BELOW BEFORE BUYING OUR COMMON STOCK. IF ANY OF THE FOLLOWING RISKS ACTUALLY OCCUR, THE TRADING PRICE OF OUR COMMON STOCK COULD DECLINE AND YOU MAY LOSE ALL OR PART OF YOUR INVESTMENT.

RISKS RELATING TO OUR BUSINESS AND FINANCIAL PERFORMANCE

WE EXPECT THAT A MAJORITY OF OUR REVENUES WILL BE GENERATED FROM A LIMITED NUMBER OF CUSTOMERS, AND OUR REVENUES WILL NOT GROW IF WE DO NOT SUCCESSFULLY SELL PRODUCTS TO THESE CUSTOMERS

To date, we have shipped our products to a limited number of customers and, as of December 31, 1999, we had not recognized any revenues. We expect that in the foreseeable future, substantially all of our revenues will depend on sales of our products to a limited number of customers. Our customers are not contractually committed to purchase any minimum quantities of products from us. The customers to whom we have shipped are currently using our products in laboratory testing and preliminary trials. Our customers may not deploy our products in their networks on a timely basis, or at all, and any delay or failure by our customers to introduce commercial services based on our products, or a downturn in their business, would seriously harm our ability to sell products and generate revenues.

WE WILL NOT BE SUCCESSFUL IF WE DO NOT GROW OUR CUSTOMER BASE BEYOND OUR INITIAL FEW CUSTOMERS

Our future success will depend on our ability to attract additional customers beyond our current limited number. The growth of our customer base could be adversely affected by:

- customer unwillingness to implement our new voice infrastructure products;
- any delays or difficulties that we may incur in completing the development and introduction of our planned products or product enhancements;
- new product introductions by our competitors;
- any failure of our products to perform as expected; or
- any difficulty we may incur in meeting customers' delivery requirements.

If we do not expand our customer base to include additional customers that deploy our products in operational, commercial networks, our revenues will not grow significantly, or at all.

THE MARKET FOR VOICE INFRASTRUCTURE FOR THE NEW PUBLIC NETWORK IS NEW AND EVOLVING AND OUR BUSINESS WILL SUFFER IF IT DOES NOT DEVELOP AS WE EXPECT

The market for our products is rapidly evolving. Packet-based technology may not be widely accepted as a platform for voice and a viable market for our products may not develop or be sustainable. If this market does not develop, or develops more slowly than we expect, we may not be able to sell our products in significant volumes, or at all.

WE ARE ENTIRELY DEPENDENT UPON OUR VOICE INFRASTRUCTURE PRODUCTS AND OUR FUTURE REVENUES DEPEND UPON THEIR COMMERCIAL SUCCESS

Our future growth depends upon the commercial success of our voice infrastructure products, particularly the GSX9000 Open Services Switch and the System 9200 Internet offload solution. We intend to develop and introduce new products and enhancements to existing products in the future. We may not successfully complete the development or introduction of these products. If our target

customers do not adopt, purchase and successfully deploy our current or planned products, our revenues will not grow.

BECAUSE OUR PRODUCTS ARE SOPHISTICATED AND DESIGNED TO BE DEPLOYED IN COMPLEX ENVIRONMENTS, THEY MAY HAVE ERRORS OR DEFECTS THAT WE FIND ONLY AFTER FULL DEPLOYMENT, WHICH COULD SERIOUSLY HARM OUR BUSINESS

Our products are sophisticated and are designed to be deployed in large and complex networks. Because of the nature of our products, they can only be fully tested when completely deployed in very large networks with high volumes of traffic. Our customers have not yet commercially deployed our products and they may discover errors or defects in the software or hardware, or the products may not operate as expected, after full deployment.

If we are unable to fix errors or other performance problems that may be identified after full deployment of our products, we could experience:

- loss of, or delay in, revenues;

- loss of customers and market share;

- a failure to attract new customers or achieve market acceptance for our products;

- increased service, support and warranty costs and a diversion of development resources; and

- costly and time-consuming legal actions by our customers.

IF WE DO NOT RESPOND RAPIDLY TO TECHNOLOGICAL CHANGES OR TO CHANGES IN INDUSTRY STANDARDS, OUR PRODUCTS COULD BECOME OBSOLETE

The market for voice infrastructure products for the new public network is likely to be characterized by rapid technological change and frequent new product introductions. We may be unable to respond quickly or effectively to these developments. We may experience software development, hardware design, manufacturing or marketing difficulties that could delay or prevent our development, introduction or marketing of new products and enhancements. The introduction of new products by competitors, the market acceptance of products based on new or alternative technologies or the emergence of new industry standards could render our existing or future products obsolete. If the standards adopted are different from those that we have chosen to support, market acceptance of our products may be significantly reduced or delayed. If our products become technologically obsolete, we may be unable to sell our products in the marketplace and generate revenues.

WE HAVE BEEN IN BUSINESS FOR A SHORT PERIOD OF TIME AND YOUR BASIS FOR EVALUATING US IS LIMITED

We were founded in August 1997, and as of the end of the last fiscal year had not recognized any product or service revenues. We have a limited meaningful operating history upon which you may evaluate us and our prospects. Moreover, we cannot be sure that we have accurately identified all of the risks to our business. Also, our assessment of the prospects for our success may prove inaccurate.

WE MAY NOT BECOME PROFITABLE

We have incurred significant losses since inception and expect to continue to incur losses in the future. As of December 31, 1999, we had an accumulated deficit of $33.9 million and had not recognized any revenues for our product shipments. We have not achieved profitability on a

quarterly or annual basis. Our revenues may not grow and we may never generate sufficient revenues to achieve or sustain profitability. We expect to continue to incur significant and increasing sales and marketing, product development, administrative and other expenses. As a result, we will need to generate significant revenues to achieve and maintain profitability.

WE WILL NOT RETAIN CUSTOMERS OR ATTRACT NEW CUSTOMERS IF WE DO NOT ANTICIPATE AND MEET SPECIFIC CUSTOMER REQUIREMENTS AND IF OUR PRODUCTS DO NOT INTEROPERATE WITH OUR CUSTOMERS' EXISTING NETWORKS

To achieve market acceptance for our products, we must effectively anticipate, and adapt in a timely manner to, customer requirements and offer products and services that meet changing customer demands. Prospective customers may require product features and capabilities that our current products do not have. The introduction of new or enhanced products also requires that we carefully manage the transition from older products in order to minimize disruption in customer ordering patterns and ensure that adequate supplies of new products can be delivered to meet anticipated customer demand. If we fail to develop products and offer services that satisfy customer requirements, or to effectively manage the transition from older products, our ability to create or increase demand for our products would be seriously harmed and we may lose current and prospective customers.

Many of our customers will require that our products be designed to interface with their existing networks, each of which may have different specifications. Issues caused by an unanticipated lack of interoperability requirements may result in significant warranty, support and repair costs, divert the attention of our engineering personnel from our product and software development efforts and cause significant customer relations problems. If our products do not interoperate with those of our customers' networks, installations could be delayed or orders for our products could be cancelled, which would seriously harm our gross margins and result in loss of revenues or customers.

IF WE FAIL TO COMPETE SUCCESSFULLY, OUR ABILITY TO INCREASE OUR REVENUES OR ACHIEVE PROFITABILITY WILL BE IMPAIRED

Competition in the telecommunications market is intense. This market has historically been dominated by large companies, such as Lucent Technologies and Nortel Networks, both of whom are direct competitors. We also face competition from other large telecommunications and networking companies, including Cisco Systems, Siemens and Tellabs, that have entered our market by acquiring companies that design competing products. In addition, a number of private companies have announced plans for new products that address the same market opportunity that we address. Because this market is rapidly evolving, additional competitors with significant financial resources may enter these markets and further intensify competition.

Many of our current and potential competitors have significantly greater selling and marketing, technical, manufacturing, financial and other resources, including the ability to offer vendor-sponsored financing programs. If we are unable or unwilling to offer vendor-sponsored financing, prospective customers may decide to purchase products from one of our competitors who offers this type of financing. Furthermore, some of our competitors are currently selling significant amounts of other products to our current and prospective customers. Our competitors' broad product portfolios coupled with already existing relationships may cause our customers to buy our competitors' products.

To compete effectively, we must deliver products that:

- provide extremely high reliability and voice quality;

- scale easily and efficiently;

- interoperate with existing network designs and other vendors' equipment;

- provide effective network management;

- are accompanied by comprehensive customer support and professional services; and

- provide a cost-effective and space-efficient solution for service providers.

If we are unable to compete successfully against our current and future competitors, we could experience price reductions, order cancellations, loss of revenues and reduced gross margins.

THE UNPREDICTABILITY OF OUR QUARTERLY RESULTS MAY ADVERSELY AFFECT THE TRADING PRICE OF OUR COMMON STOCK

Our revenues and operating results will vary significantly from quarter to quarter due to a number of factors, many of which are outside of our control and any of which may cause our stock price to fluctuate. Generally, purchases by service providers of telecommunications equipment from manufacturers have been unpredictable and clustered, rather than steady, as the providers build out their networks. The primary factors that may affect our revenues and results include the following:

- fluctuation in demand for our voice infrastructure products and the timing and size of revenues;

- the length and variability of the sales cycle for our products and the corresponding timing of recognizing revenues and deferred revenues;

- new product introductions and enhancements by our competitors and us;

- changes in our pricing policies, the pricing policies of our competitors and the prices of the components of our products;

- our ability to develop, introduce and ship new products and product enhancements that meet customer requirements in a timely manner;

- our ability to obtain sufficient supplies of sole or limited source components;

- our ability to attain and maintain production volumes and quality levels for our products;

- costs related to acquisitions of complementary products, technologies or businesses; and

- general economic conditions, as well as those specific to the telecommunications, networking and related industries.

Our operating expenses are largely based on anticipated organizational growth and revenue trends. As a result, a delay in generating or recognizing revenues for the reasons set forth above, or for any other reason, could cause significant variations in our operating results. We believe that quarter-to-quarter comparisons of our operating results are not a good indication of our future performance. It is likely that in some future quarters, our operating results may be below the expectations of public market analysts and investors. In this event, the price of our common stock will probably substantially decrease.

WE DEPEND UPON CONTRACT MANUFACTURERS AND ANY DISRUPTION IN THESE RELATIONSHIPS MAY CAUSE US TO FAIL TO MEET THE DEMANDS OF OUR CUSTOMERS AND DAMAGE OUR CUSTOMER RELATIONSHIPS

We rely on a small number of contract manufacturers to manufacture our products according to our specifications and to fill orders on a timely basis. Our contract manufacturers provide comprehensive manufacturing services, including assembly of our products and procurement of materials. Each of our contract manufacturers also builds products for other companies and may

not always have sufficient quantities of inventory available to fill our orders, or may not allocate their internal resources to fill these orders on a timely basis. We do not have long-term supply contracts with our manufacturers and they are not required to manufacture products for any specified period. We do not have internal manufacturing capabilities to meet our customers' demands. Qualifying a new contract manufacturer and commencing commercial-scale production is expensive and time consuming and could result in a significant interruption in the supply of our products. If a change in contract manufacturers results delays our fulfillment of customer orders, we may lose revenues and suffer damage to our customer relationships.

WE AND OUR CONTRACTOR MANUFACTURERS RELY ON SINGLE OR LIMITED SOURCES FOR SUPPLY OF SOME COMPONENTS OF OUR PRODUCTS AND IF WE FAIL TO ADEQUATELY PREDICT OUR MANUFACTURING REQUIREMENTS OR IF OUR SUPPLY OF ANY OF THESE COMPONENTS IS DISRUPTED, WE WILL BE UNABLE TO SHIP OUR PRODUCTS

We and our contractor manufacturers currently purchase several key components of our products, including commercial digital signal processors, from single or limited sources. We purchase these components on a purchase order basis. If we overestimate our component requirements, we could have excess inventory, which would increase our costs. If we underestimate our requirements, we may not have adequate supply, which could interrupt manufacturing of our products and result in delays in shipments and revenues.

We currently do not have long-term supply contracts with our component suppliers and they are not required to supply us with products for any specified periods, in any specified quantities or at any set price, except as may be specified in a particular purchase order. In the event of a disruption or delay in supply, or inability to obtain products, we may not be able to develop an alternate source in a timely manner or at favorable prices, or at all. A failure to find acceptable alternative sources could hurt our ability to deliver high-quality products to our customers and negatively affect our operating margins. In addition, our reliance on our suppliers exposes us to potential supplier production difficulties or quality variations. Our customers rely upon our ability to meet committed delivery dates, and any disruption in the supply of key components would seriously impact our ability to meet these dates and could result in legal action by our customers, loss of customers or harm to our ability to attract new customers.

IF WE ARE NOT ABLE TO OBTAIN NECESSARY LICENSES OF THIRD-PARTY TECHNOLOGY AT ACCEPTABLE PRICES, OR AT ALL, OUR PRODUCTS COULD BECOME OBSOLETE

We have incorporated third-party licensed technology into our current products. From time to time, we may be required to license additional technology from third parties to develop new products or product enhancements. Third-party licenses may not be available or continue to be available to us on commercially reasonable terms. The inability to maintain or re-license any third-party licenses required in our current products, or to obtain any new third-party licenses to develop new products and product enhancements could require us to obtain substitute technology of lower quality or performance standards or at greater cost, and delay or prevent us from making these products or enhancements, any of which could seriously harm the competitiveness of our products.

OUR FAILURE TO MANAGE OUR EXPANSION EFFECTIVELY IN A RAPIDLY CHANGING MARKET COULD INCREASE OUR COSTS, HARM OUR ABILITY TO SELL FUTURE PRODUCTS AND IMPAIR OUR FUTURE GROWTH

We intend to expand our operations rapidly and plan to hire a significant number of employees during 2000. Our growth has placed, and our anticipated growth will continue to place, a significant strain on our management systems and resources. Our ability to successfully offer our products and implement our business plan in a rapidly evolving market requires an effective planning and management process. We expect that we will need to continue to improve our financial, managerial

and manufacturing controls and reporting systems, and will need to continue to expand, train and manage our work force worldwide. If we fail to implement adequate control systems in an efficient and timely manner, our costs may be increased and our growth could be impaired and we may not be able to accurately anticipate and fulfill market demand, the result of which will be a loss of revenues and customers.

IF WE FAIL TO HIRE AND RETAIN NEEDED PERSONNEL, THE IMPLEMENTATION OF OUR BUSINESS PLAN COULD SLOW OR OUR FUTURE GROWTH COULD HALT

Competition for highly skilled engineering, sales, marketing and support personnel is intense because there are a limited number of people available with the necessary technical skills and understanding of our market. Any failure to attract, assimilate or retain qualified personnel to fulfill our current or future needs could impair our growth. The support of our products requires highly trained customer support and professional services personnel. Once we hire them, they may require extensive training in our voice infrastructure products. If we are unable to hire, train and retain our customer support and professional services personnel, we may not be able to increase sales of our products.

Our future success depends upon the continued services of our executive officers who have critical industry experience and relationships that we rely on to implement our business plan. None of our officers or key employees is bound by an employment agreement for any specific term. The loss of the services of any of our officers or key employees could delay the development and introduction of, and negatively impact our ability to sell, our products.

OUR ABILITY TO COMPETE AND OUR BUSINESS COULD BE JEOPARDIZED IF WE ARE UNABLE TO PROTECT OUR INTELLECTUAL PROPERTY OR BECOME SUBJECT TO INTELLECTUAL PROPERTY RIGHTS LITIGATION, WHICH COULD REQUIRE US TO INCUR SIGNIFICANT COSTS

We rely on a combination of patent, copyright, trademark and trade secret laws and restrictions on disclosure to protect our intellectual property rights. Despite our efforts to protect our proprietary rights, unauthorized parties may attempt to copy or otherwise obtain and use our products or technology. Monitoring unauthorized use of our products is difficult and we cannot be certain that the steps we have taken will prevent unauthorized use of our technology, particularly in foreign countries where the laws may not protect our proprietary rights as fully as in the United States. If competitors are able to use our technology, our ability to compete effectively could be harmed.

In addition, we may also become involved in litigation as a result of allegations that we infringe intellectual property rights of others. Any parties asserting that our products infringe upon their proprietary rights would force us to defend ourselves and possibly our customers or contract manufacturers against the alleged infringement. These claims and any resulting lawsuit, if successful, could subject us to significant liability for damages and invalidation of our proprietary rights. Any potential intellectual property litigation also could force us to do one or more of the following:

- stop selling, incorporating or using our products that use the challenged intellectual property;

- obtain from the owner of the infringed intellectual property right a license to sell or use the relevant technology, which license may not be available on reasonable terms, or at all; or

- redesign those products that use any allegedly infringing technology.

Any lawsuits regarding intellectual property rights, regardless of their success, would be time-consuming, expensive to resolve and would divert our management's time and attention.

IF WE ARE SUBJECT TO UNFAIR HIRING CLAIMS, WE COULD INCUR SUBSTANTIAL COSTS IN DEFENDING OURSELVES

Companies in our industry whose employees accept positions with competitors frequently claim that their competitors have engaged in unfair hiring practices. We may be subject to claims of this kind in the future as we seek to hire qualified personnel. Those claims may result in material litigation. We could incur substantial costs defending ourselves or our employees against those claims, regardless of their merits. In addition, defending ourselves from those types of claims could divert our management's attention from our operations. If we are found to have engaged in unfair hiring practices, or our employees are found to have violated agreements with previous employers, we may suffer a significant disruption in our operations.

WE MAY FACE RISKS ASSOCIATED WITH OUR INTERNATIONAL EXPANSION THAT COULD IMPAIR OUR ABILITY TO GROW OUR REVENUES ABROAD

We intend to expand into international markets. This expansion will require significant management attention and financial resources to successfully develop direct and indirect international sales and support channels. In addition, we may not be able to develop international market demand for our products, which could impair our ability to grow our revenues.

We have limited experience marketing and distributing our products internationally and, to do so, we expect that we will need to develop versions of our products that comply with local standards. Furthermore, international operations are subject to other inherent risks, including:

- greater difficulty collecting accounts receivable and longer collection periods;

- difficulties and costs of staffing and managing foreign operations;

- the impact of differing technical standards outside the United States;

- the impact of recessions in economies outside the United States;

- unexpected changes in regulatory requirements and currency exchange rates;

- certification requirements;

- reduced protection for intellectual property rights in some countries; and

- potentially adverse tax consequences.

ANY INVESTMENTS OR ACQUISITIONS WE MAKE COULD DISRUPT OUR BUSINESS AND SERIOUSLY HARM OUR FINANCIAL CONDITION

Although we have no current agreements to do so, we intend to consider investing in, or acquiring, complementary products, technologies or businesses. In the event of any future investments or acquisitions, we could:

- issue stock that would dilute our current stockholders' percentage ownership;

- incur debt or assume liabilities;

- incur significant amortization expenses related to goodwill and other intangible assets; or

- incur large and immediate write-offs.

Our integration of any acquired products, technologies or businesses will also involve numerous risks, including:

- problems and unanticipated costs associated with combining the purchased products, technologies or businesses;

- diversion of management's attention from our core business;

- adverse effects on existing business relationships with suppliers and customers;

- risks associated with entering markets in which we have limited or no prior experience; and

- potential loss of key employees, particularly those of the acquired organizations.

We may be unable to successfully integrate any products, technologies, businesses or personnel that we might acquire in the future without significant costs or disruption to our business.

WE MAY NEED ADDITIONAL CAPITAL IN THE FUTURE, WHICH MAY NOT BE AVAILABLE TO US, AND IF IT IS AVAILABLE, MAY DILUTE YOUR OWNERSHIP OF OUR COMMON STOCK

We may need to raise additional funds through public or private debt or equity financings in order to:

- fund ongoing operations;

- take advantage of opportunities, including more rapid expansion or acquisition of complementary products, technologies or businesses;

- develop new products; or

- respond to competitive pressures.

Any additional capital raised through the sale of equity may dilute your percentage ownership of our common stock. Furthermore, additional financings may not be available on terms favorable to us, or at all.

RISKS RELATING TO THIS OFFERING

OUR STOCK PRICE MAY BE VOLATILE AND YOU MAY NOT BE ABLE TO RESELL YOUR SHARES AT OR ABOVE THE INITIAL OFFERING PRICE

The market for technology stocks has been extremely volatile. The following factors could cause the market price of our common stock to fluctuate significantly from the price you pay in this offering:

- loss of any of our major customers;

- the addition or departure of key personnel;

- variations in our quarterly operating results;

- announcements by us or our competitors of significant contracts, new products or product enhancements, acquisitions, distribution partnerships, joint ventures or capital commitments;

- changes in financial estimates by securities analysts;

- sales of common stock or other securities by us in the future;

- changes in market valuations of telecommunications and networking companies; and

- fluctuations in stock market prices and volumes.

In addition, the stock market in general, and the Nasdaq National Market and technology companies in particular, have experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of these companies. The trading prices of many technology companies' stocks are at or near historical highs and these trading prices and multiples are substantially above historical levels and may not be sustained. These

broad market and industry trends may materially and adversely affect the market price of our common stock, regardless of our actual operating performance. In the past, following periods of volatility in the market price of a company's securities, securities class-action litigation has often been initiated against these companies. Class-action litigation, if initiated, could result in substantial costs and a diversion of management's attention and resources. All of these factors could cause the market price of our stock to drop and you may not be able to sell your shares at or above the initial offering price.

AN ACTIVE TRADING MARKET FOR OUR COMMON STOCK MAY NOT DEVELOP

Prior to this offering, you could not buy or sell our common stock publicly. Although we expect our common stock to be quoted on the Nasdaq National Market, an active trading market for our shares may not develop or be sustained following this offering. You may not be able to resell your shares at prices equal to or greater than the initial public offering price. The initial public offering price will be determined through negotiations between us and our underwriters and may not be indicative of the market price for these shares following this offering. You should read "Underwriting" for a discussion of the factors to be considered in determining the initial public offering price.

OUR MANAGEMENT MAY APPLY THE PROCEEDS OF THIS OFFERING TO USES THAT DO NOT PRODUCE PROFITABILITY OR INCREASE MARKET VALUE

Our management will have considerable discretion in applying the net proceeds of this offering, and you will not have the opportunity, as part of your investment decision, to assess whether the proceeds are being used appropriately. The net proceeds may be used for corporate purposes that do not generate revenues or increase our market value. Pending application of the proceeds, they may be placed in investments that do not produce income or that lose value.

INSIDERS WILL CONTINUE TO HAVE SUBSTANTIAL CONTROL OVER US AFTER THIS OFFERING AND COULD LIMIT YOUR ABILITY TO INFLUENCE THE OUTCOME OF KEY TRANSACTIONS, INCLUDING CHANGES OF CONTROL

We anticipate that our executive officers, directors and entities affiliated with them will, in the aggregate, beneficially own approximately % of our outstanding common stock following the completion of this offering, assuming the underwriters do not exercise their over-allotment option. These stockholders, if acting together, would be able to influence significantly all matters requiring approval by our stockholders, including the election of directors and the approval of mergers or other business combination transactions. See "Principal Stockholders."

PROVISIONS OF OUR CHARTER DOCUMENTS AND DELAWARE LAW MAY HAVE ANTI-TAKEOVER EFFECTS THAT COULD PREVENT A CHANGE OF CONTROL

Provisions of our amended and restated certificate of incorporation, amended and restated by-laws, and Delaware law could make it more difficult for a third party to acquire us, even if doing so would be beneficial to our stockholders. See "Description of Capital Stock."

THERE MAY BE SALES OF A SUBSTANTIAL AMOUNT OF OUR COMMON STOCK AFTER THIS OFFERING THAT COULD CAUSE OUR STOCK PRICE TO FALL

Our current stockholders hold a substantial number of shares, which they will be able to sell in the public market in the near future. Sales of a substantial number of shares of our common stock within a short period of time after this offering could cause our stock price to fall. In addition, the sale of these shares could impair our ability to raise capital through the sale of additional stock. See "Shares Eligible for Future Sale."

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements based on our current expectations, assumptions, estimates and projections about ourselves and our industry. These forward-looking statements involve risks and uncertainties. Our actual results could differ materially from those anticipated in these forward-looking statements, as more fully described in the "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" sections and elsewhere in this prospectus. We undertake no obligation to update publicly any forward-looking statements for any reason, even if new information becomes available or other events occur in the future.

USE OF PROCEEDS

Our net proceeds from the sale of the shares of common stock in this offering will be approximately $ million, assuming an initial public offering price of $ per share, the mid-point of the range set forth on the cover of this prospectus, after deducting the underwriting discounts and estimated offering expenses payable by us. If the underwriters' over-allotment option is exercised in full, we estimate that the net proceeds will be $ million.

The principal purposes of this offering are to fund our operations, to obtain additional working capital, to establish a public market for our common stock, to increase our visibility in the marketplace, to facilitate future access to public capital markets and to provide currency for potential acquisitions.

We expect to use the net proceeds from this offering for general corporate purposes, including the funding of operations, the expansion of sales, marketing and product development activities working capital, capital expenditures and the repayment of outstanding amounts under our equipment line of credit. In addition, we may use a portion of the net proceeds to acquire complementary products, technologies or businesses; however, we currently have no plans, commitments or agreements with respect to any of these types of transactions. Pending their use, we plan to invest the net proceeds in investment-grade, interest-bearing securities.

DIVIDEND POLICY

We have never declared or paid any cash dividends on our common stock or other securities. We currently expect to retain future earnings, if any, for use in the operation and expansion of our business and do not anticipate paying any cash dividends in the foreseeable future. Our credit agreement with a commercial bank prohibits the payment of dividends without prior approval.

CAPITALIZATION

The following table sets forth our capitalization as of December 31, 1999:

- on an actual basis;
- on a pro forma basis to reflect the sale in March 2000 of 1,509,154 shares of Series D redeemable convertible preferred stock at $16.40 per share and the conversion of all outstanding redeemable convertible preferred stock into 32,319,074 shares of common stock upon the closing of this offering; and
- on a pro forma as adjusted basis to give effect to the sale of the shares of common stock offered in this offering after deducting the underwriting discounts and estimated offering expenses payable by us assuming an initial public offering price of $ per share, the mid-point of the range set forth on the cover of this prospectus.

This table should be read in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and the financial statements and the notes to those statements included elsewhere in this prospectus.

	AS OF DECEMBER 31, 1999		
	ACTUAL	PRO FORMA	PRO FORMA AS ADJUSTED
	(IN THOUSANDS, EXCEPT SHARE DATA)		
Long-term obligations, less current portion	$ 3,402	$ 3,402	
Redeemable convertible preferred stock, $0.01 par value; 15,000,000 shares authorized, 12,323,968 shares issued and outstanding, actual; no shares authorized, issued and outstanding, on a pro forma and pro forma as adjusted basis	46,109	--	
Stockholders' equity (deficit):			
Preferred stock, $0.01 par value; no shares authorized, issued and outstanding on an actual basis; 5,000,000 shares authorized, no shares issued and outstanding, on a pro forma and pro forma as adjusted basis		--	
Common stock, $0.001 par value; 70,000,000 shares authorized, 21,836,974 shares issued and outstanding, actual; 300,000,000 shares authorized, 54,156,048 shares issued and outstanding, on a pro forma basis; 300,000,000 shares authorized, and shares issued and outstanding, on a pro forma as adjusted basis (1)	22	54	
Capital in excess of par value	25,611	96,438	
Deficit accumulated during the development stage	(33,882)	(33,922)	
Stock subscriptions receivable	(346)	(346)	
Deferred compensation	(16,604)	(16,604)	
Total stockholders' equity (deficit)	(25,199)	45,620	
Total capitalization	$ 24,312	$ 49,022	

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(1) Based on shares outstanding as of December 31, 1999. Excludes 1,017,581 shares of common stock issuable upon exercise of outstanding stock options at a weighted average exercise price of $0.32 per share. Includes 14,621,755 shares of restricted common stock which are subject to our right to repurchase upon termination of employment of the holder at a weighted average repurchase price of $0.13 per share.

DILUTION

Our pro forma net tangible book value as of December 31, 1999 was approximately $45.2 million, or $0.83 per share of common stock outstanding. Pro forma net tangible book value per share represents the amount of total tangible assets less total liabilities, divided by the pro forma shares of common stock outstanding as of December 31, 1999, after giving effect to the sale in March 2000 of 1,509,154 shares of Series D redeemable convertible preferred stock at $16.40 per share and the conversion of all shares of redeemable convertible preferred stock into 32,319,074 shares of common stock. After giving effect to the issuance and sale of the shares of common stock offered in this offering and after deducting the underwriting discounts and estimated offering expenses payable by us, assuming an initial public offering price of $ per share, the mid-point of the range set forth on the cover of this prospectus, our pro forma net tangible book value as of December 31, 1999 would have been $ million, or $ per share. This represents an immediate increase in pro forma net tangible book value of $ per share to existing stockholders and an immediate dilution of $ per share to new investors. The following table illustrates this per share dilution:

Assumed initial public offering price per share		$
Pro forma net tangible book value per share at December 31, 1999	$ 0.83	
Increase in pro forma net tangible book value per share attributable to new investors		
Pro forma net tangible book value per share after this offering		
Dilution per share to new investors		$

The following table summarizes, on a pro forma basis, as of December 31, 1999, the differences between the number of shares of common stock purchased from us, the total consideration provided to us, and the average price per share paid by existing stockholders and by new investors purchasing stock in this offering:

	SHARES PURCHASED		TOTAL CONSIDERATION		AVERAGE PRICE
	NUMBER	PERCENT	AMOUNT	PERCENT	PER SHARE
Existing stockholders	54,156,048	%	$72,923,000	%	$ 1.35
New investors					
Total		%		%	

The discussion and table above excludes as of December 31, 1999, 1,017,581 shares of common stock issuable upon exercise of outstanding stock options at a weighted average exercise price of $0.32 per share under our 1997 Stock Incentive Plan. To the extent any of these options are exercised, there will be further dilution to new investors. If the underwriters' over-allotment option is exercised in full, the number of shares held by new investors will increase to shares, or % of the total number of shares of common stock outstanding after this offering. See "Management--Benefit Plans" and notes 9 and 11 to our financial statements. The outstanding share information also includes 1,509,154 shares of common stock issuable upon conversion of the Series D redeemable convertible preferred stock that were issued in March 2000.

SELECTED FINANCIAL DATA

The following selected financial data should be read in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our financial statements and notes to those statements included elsewhere in this prospectus. The statement of operations data for the period from our inception on August 7, 1997 to December 31, 1997 and the years ended December 31, 1998 and 1999 and the balance sheet data as of December 31, 1998 and 1999 are derived from our financial statements, audited by Arthur Andersen LLP, independent public accountants, which are included elsewhere in this prospectus. The balance sheet data as of December 31, 1997 have been derived from our financial statements audited by Arthur Andersen LLP, independent public accountants, not included in this prospectus.

	PERIOD FROM INCEPTION (AUGUST 7, 1997) TO DECEMBER 31, 1997	YEAR ENDED DECEMBER 31, 1998	YEAR ENDED DECEMBER 31, 1999	PERIOD FROM INCEPTION (AUGUST 7, 1999) TO DECEMBER 31, 1999
	(IN THOUSANDS, EXCEPT PER SHARE DATA)			
STATEMENT OF OPERATIONS DATA:				
Revenues	$ --	$ --	$ --	$ --
Operating expenses:				
Manufacturing	--	--	1,861	1,861
Research and development	299	5,853	10,863	17,015
Sales and marketing	--	438	5,610	6,048
General and administrative	187	937	1,785	2,909
Amortization of stock compensation	--	--	4,255	4,255
Total operating expenses	486	7,228	24,374	32,088
Loss from operations	(486)	(7,228)	(24,374)	(32,088)
Interest income (expense), net	25	314	487	826
Net loss	(461)	(6,914)	(23,887)	(31,262)
Beneficial conversion feature of Series C preferred stock	--	--	(2,500)	(2,500)
Net loss applicable to common stockholders	$(461)	$ (6,914)	$ (26,387)	$ (33,762)
Net loss per share (1):				
Basic and diluted	$ --	$ (4.27)	$ (5.53)	
Pro forma basic and diluted			(0.75)	
Shares used in computing net loss per share (1):				
Basic and diluted	--	1,619,289	4,774,763	
Pro forma basic and diluted			32,062,786	

	AS OF DECEMBER 31, 1997	AS OF DECEMBER 31, 1998	AS OF DECEMBER 31, 1999
	(IN THOUSANDS)		
BALANCE SHEET DATA:			
Cash, cash equivalents and marketable securities	$6,606	$16,501	$23,566
Working capital	6,308	15,321	19,604
Total assets	6,987	18,416	30,782
Long term obligations, less current portion	6	1,220	3,402
Redeemable convertible preferred stock	7,100	22,951	46,109
Total stockholders' deficit	(447)	(7,097)	(25,199)

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(1) See note (1)(n) to our financial statements for an explanation of the method of calculation. Pro forma per share calculation reflects the conversion upon the closing of the offering of all the outstanding shares of Series A, Series B and Series C redeemable convertible preferred stock into shares of common stock, as if the conversion occurred at the date of original issue.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

THE FOLLOWING DISCUSSION SHOULD BE READ IN CONJUNCTION WITH OUR FINANCIAL STATEMENTS AND NOTES TO THOSE STATEMENTS AND OTHER FINANCIAL INFORMATION APPEARING ELSEWHERE IN THIS PROSPECTUS. THE FOLLOWING DISCUSSION CONTAINS FORWARD-LOOKING INFORMATION THAT INVOLVES RISKS AND UNCERTAINTIES. OUR ACTUAL RESULTS COULD DIFFER MATERIALLY FROM THOSE ANTICIPATED IN THE FORWARD-LOOKING STATEMENTS AS A RESULT OF CERTAIN FACTORS, INCLUDING THE RISKS DISCUSSED IN "RISK FACTORS" AND ELSEWHERE IN THIS PROSPECTUS.

OVERVIEW

We are a leading provider of voice infrastructure products for the new public network. Our hardware and software enable customers to deploy an integrated, packet-based network carrying both voice and data traffic. From our inception in August 1997 through December 31, 1999, our operating activities consisted primarily of research and development, product design, development and testing. We also staffed and trained our administrative, marketing and sales organizations and began sales and marketing activities.

Since our inception, we have incurred significant losses and, as of December 31, 1999, had a deficit accumulated during the development stage of $33.9 million. We have not achieved profitability on a quarterly or an annual basis, and anticipate that we will continue to incur net losses. We have a lengthy sales cycle for our products and, accordingly, we expect to incur sales and other expenses before we realize the related revenues. We expect to incur significant sales and marketing, research and development and general and administrative expenses and, as a result, we will need to generate significant revenues to achieve and maintain profitability.

We sell our products through a direct sales force and resellers, including Lucent Technologies, who represents us as a sales agent for one of our customers, Global Crossing. In the future, we anticipate expanding our sales efforts to include overseas distribution partners. Customers' decisions to purchase our products to deploy in commercial networks involve a significant commitment of resources and a lengthy evaluation, testing and product qualification process. We believe these long sales cycles, as well as our expectation that customers will tend to sporadically place large orders with short lead times, will cause our revenues and results of operations to vary significantly and unexpectedly from quarter to quarter. We expect to recognize revenues from a limited number of customers for the foreseeable future.

We recognize revenue from product sales to end users and resellers upon shipment, provided there are no uncertainties regarding acceptance, persuasive evidence of an arrangement exists, the sales price is fixed or determinable and collection of the related receivable is probable. If uncertainties exist, we recognize revenue when those uncertainties are resolved. Service revenue is recognized as the services are performed or ratably over the terms of the service contracts. Amounts collected prior to satisfying our revenue recognition criteria are reflected as deferred revenue. We estimate and record warranty costs at the time of product revenue recognition. In November 1999, we began shipping our products. As of December 31, 1999, we had not recognized any revenues from our product shipments and had a total of $1.0 million in deferred revenue that we expect will be recognized in 2000.

GROSS PROFIT MARGINS. We believe that our gross profit margins will be affected primarily by the following factors:

- demand for our products and services;

- new product introductions both by us and by our competitors;

- product service and support costs associated with initial deployment of our products in customers' networks;

- changes in our pricing policies and those of our competitors;

- the mix of product configurations sold;

- the mix of sales channels through which our products and services are sold; and

- the volume of manufacturing and costs of manufacturing and components.

MANUFACTURING EXPENSES. Our manufacturing expenses consist primarily of amounts paid to third-party manufacturers, manufacturing start-up expenses, manufacturing personnel and related costs. Commencing in 1999, we outsourced our manufacturing to third-parties. Manufacturing engineering, documentation control, final testing and assembly are performed at our facility in Westford, Massachusetts.

RESEARCH AND DEVELOPMENT EXPENSES. Research and development expenses consist primarily of salaries and related personnel costs, recruiting expenses and prototype costs related to the design, development, testing and enhancement of our products. We have expensed our research and development costs as incurred. Some aspects of our research and development effort require significant short-term expenditures, the timing of which can cause significant quarterly variability in our expenses. We believe that research and development is critical to our strategic product development objectives and we intend to enhance our technology to meet the changing requirements of our customers. As a result, we expect our research and development expenses to increase in absolute dollars in the future.

SALES AND MARKETING EXPENSES. Sales and marketing expenses consist primarily of salaries and related personnel expenses, commissions, promotions, customer evaluations and other marketing expenses and recruiting expenses. We expect that sales and marketing expenses will increase substantially in absolute dollars in the future as we increase our direct sales efforts, expand our operations internationally, hire additional sales and marketing personnel, initiate additional marketing programs and establish sales offices in new locations.

GENERAL AND ADMINISTRATIVE EXPENSES. General and administrative expenses consist primarily of salaries and related expenses for executive, finance, and accounting personnel, recruiting expenses and professional fees. We expect that general and administrative expenses will increase in absolute dollars as we add personnel and incur additional costs related to the growth of our business and our operation as a public company.

STOCK-BASED COMPENSATION. In connection with our grant of stock options and issuance of restricted common stock during the year ended December 31, 1999, we recorded deferred compensation of $20.9 million. Stock-based compensation includes primarily the amortization of stock compensation charges resulting from the granting of stock options and the sales of restricted shares to employees with exercise or sales prices that may be deemed for accounting purposes to be below the fair value of our common stock on the date of grant. These amounts are being amortized over the vesting periods of the applicable options or restricted stock, which are approximately four years. See note 9(d) to our financial statements. During the quarter ending March 31, 2000, we expect to record an additional $26.0 million in deferred compensation.

BENEFICIAL CONVERSION OF PREFERRED STOCK. In 1999, we recorded a charge to accumulated deficit of $2.5 million representing the beneficial conversion feature of our Series C redeemable convertible preferred stock that was sold in November and December 1999. This charge is accounted for as a dividend to preferred stockholders and, as a result, will increase the net loss available to common stockholders and the related net loss per share.

RESULTS OF OPERATIONS

Because we were incorporated in August 1997 and commenced our principal operations in November 1997 after obtaining our initial funding, management believes that a discussion of the period from inception to December 31, 1997 would not be meaningful.

MANUFACTURING EXPENSES. Manufacturing expenses were $1.9 million in 1999, compared to no expense in 1998. The increase was due to the commencement of manufacturing operations.

RESEARCH AND DEVELOPMENT EXPENSES. Research and development expenses were $10.9 million in 1999, an increase of $5.0 million, or 86%, from $5.9 million in 1998. The increase reflects costs primarily associated with a significant increase in personnel and personnel-related expenses and, to a lesser extent, recruiting expenses and prototype expenses for the development of our products.

SALES AND MARKETING EXPENSES. Sales and marketing expenses were $5.6 million in 1999, an increase of $5.2 million from $438,000 in 1998. The increase reflects costs primarily associated with the hiring of additional sales and marketing personnel and, to a lesser extent, marketing program costs, including Web development, trade shows and product launch activities.

GENERAL AND ADMINISTRATIVE EXPENSES. General and administrative expenses were $1.8 million in 1999, an increase of $848,000, or 91%, from $937,000 in 1998. The increase reflects costs primarily associated with the hiring of additional general and administrative personnel and, to a lesser extent, expenses necessary to support and scale our operations.

AMORTIZATION OF STOCK-BASED COMPENSATION. Amortization of stock-based compensation expense was $4.3 million for 1999. The amortization of deferred stock compensation results from the granting of stock options and selling of restricted common stock to employees with the exercise or sales prices below the deemed fair value of our common stock on the date of grant or sale for accounting purposes. Based on the grant of stock options and sale of restricted common stock to employees through March 10, 2000, we expect to incur future amortization of stock-based compensation of at least $20.3 million in 2000, $12.0 million in 2001, $6.7 million in 2002, $3.1 million in 2003 and $500,000 in 2004.

INTEREST INCOME (EXPENSE), NET. Interest income consists of interest earned on our cash balances and marketable securities. Interest expense consists of interest incurred on equipment debt. Interest income, net of interest expense was $487,000 and $314,000 for 1999 and 1998, respectively. This increase reflects higher invested balances partially offset by an increase in interest expense from incurred borrowings.

NET OPERATING LOSS CARRYFORWARDS. As of December 31, 1999, we had approximately $23.0 million of state and federal net operating loss carryforwards for tax reporting purposes available to offset future taxable income. These net operating loss carryforwards expire at dates through 2019, to the extent that they are not used. We have not recognized any benefit from the future use of loss carryforwards for these periods, or for any other periods since inception. Use of the net operating loss carryforwards may be limited in future years if there is a significant change in our ownership. Management has recorded a full valuation allowance for the related net deferred tax asset due to the uncertainty of realizing the benefit of this asset.

LIQUIDITY AND CAPITAL RESOURCES

Since inception, we have financed our operations primarily through private sales of redeemable convertible preferred stock totaling $46.1 million in net proceeds through December 31, 1999. In March 2000, we sold additional redeemable convertible preferred stock for approximately

$24.7 million in net proceeds. Upon the closing of this offering, all of our redeemable convertible preferred stock will convert into 32,319,074 shares of common stock. We have also financed our operations through net long-term borrowings of $4.7 million for the purchase of fixed assets. At December 31, 1999, cash, cash equivalents and marketable securities totaled $23.6 million.

Net cash used in operating activities was $16.0 million for 1999 and $5.9 million for 1998. Net cash flows from operating activities in each period reflect increasing net losses and, to a lesser extent, inventory purchases in 1999 offset in part by increases in accounts payable, accrued expenses and deferred revenue.

Net cash used in investing activities was $6.4 million for 1999 and $14.8 million for 1998. Net cash used for investing activities in each year reflects increasing purchases of property and equipment, primarily computers and test equipment for our development and manufacturing activities and net purchases and maturities of marketable securities. We used amounts invested in marketable securities in 1998 to fund operations in 1999. We expect capital expenditures to continue to increase in the year 2000 to approximately $11.0 million, due to our expansion and expenditures for software licenses, computers and test equipment.

Net cash provided by financing activities was $27.6 million for 1999 and $17.7 million for 1998. Net cash provided by financing activities for these years was derived primarily from private sales of redeemable convertible preferred stock and long-term borrowings. We also have a $7.0 million bank equipment line of credit with available borrowings of $1.7 million as of December 31, 1999. This line of credit is collateralized by all of our assets, except intellectual property, and bears interest at the bank's prime rate plus 1/2% per year. At December 31, 1999, an aggregate of approximately $4.7 million was outstanding under this line of credit. We are required to comply with various financial and restrictive covenants.

We believe that the net proceeds from this offering, together with our current cash, cash equivalents and marketable securities and available line of credit, will be sufficient to meet our anticipated cash needs for working capital and capital expenditures for at least 12 months. If our existing resources, proceeds from this offering and cash generated from operations are insufficient to satisfy our liquidity requirements, we may seek to sell additional equity or debt securities. The sale of additional equity or convertible debt securities could result in additional dilution to our stockholders, and we cannot be certain that additional financing will be available in amounts or on terms acceptable to us, if at all. If we are unable to obtain this additional financing, we may be required to reduce the scope of our planned product development and sales and marketing efforts, which could harm our business, financial condition and operating results.

MARKET RISK

We do not currently use derivative financial instruments. We generally place our marketable security investments in high-quality credit instruments, primarily U.S. Government obligations and corporate obligations with contractual maturities of less than one year. We do not expect any material loss from our marketable security investments and therefore believe that our potential interest rate exposure is not material.

RECENT ACCOUNTING PRONOUNCEMENT

In December 1999, the Securities and Exchange Commission issued Staff Accounting Bulletin No. 101, "Revenue Recognition." This bulletin established guidelines for revenue recognition. We have not recognized any revenues to date. We will recognize revenues in accordance with this recent pronouncement. We do not expect the adoption of this methodology to have a material impact on our financial condition or results of operations.

In June 1998, the Financial Accounting Standards Board issued Statement of Financial Accounting Standards No. 133, "Accounting for Derivatives and Hedging Activities," which establishes accounting and reporting standards for derivative instruments, including derivative instruments embedded in other contracts, and for hedging activities. We do not currently engage in trading market risk sensitive instruments or purchasing hedging instruments or "other than trading" instruments that are likely to expose us to market risk, whether interest rate, foreign currency exchange, commodity price or equity price risk. We may do so in the future as our operations expand domestically and abroad. We will evaluate the impact of foreign currency exchange risk and other derivative instrument risk on our results of operations when appropriate. We will adopt SFAS No. 133 as required by SFAS No. 137, "Deferral of the effective date of the FASB Statement No. 133," in fiscal year 2001. The adoption of SFAS No. 133 is not expected to have a material impact on our financial condition or results of operations.

OVERVIEW

We are a leading provider of voice infrastructure products for the new public network. Our hardware and software enable customers to deploy an integrated, packet-based network carrying both voice and data traffic.

We expect two global forces--deregulation and the expansion of the Internet--to revolutionize the public telephone network worldwide. Packet networks more efficiently use available network bandwidth as compared to traditional circuit-switched telephone networks, which were designed for voice traffic and built long before the advent of the Internet. Our GSX9000 Open Services Switch, PSX6000 SoftSwitch, SGX2000 SS7 signaling gateway and System 9200 Internet offload solution are designed to offer high-reliability, toll-quality voice, improved economics, interoperability, rapid deployment and an open architecture enabling the design and implementation of new services and applications.

Our objective is to be the primary supplier of voice infrastructure products for the new public network. We intend to capitalize on our early technology and market lead to build the premier franchise in voice infrastructure solutions for the new public network.

INDUSTRY BACKGROUND

The public telephone network is an integral part of our everyday lives. For most of its 100-year history, the telephone industry has been heavily regulated, which has slowed the evolution of its underlying circuit-switching technologies and limited innovation in service offerings and the pricing of telephone services. We expect two global forces--deregulation and the expansion of the Internet--to revolutionize the public telephone network worldwide.

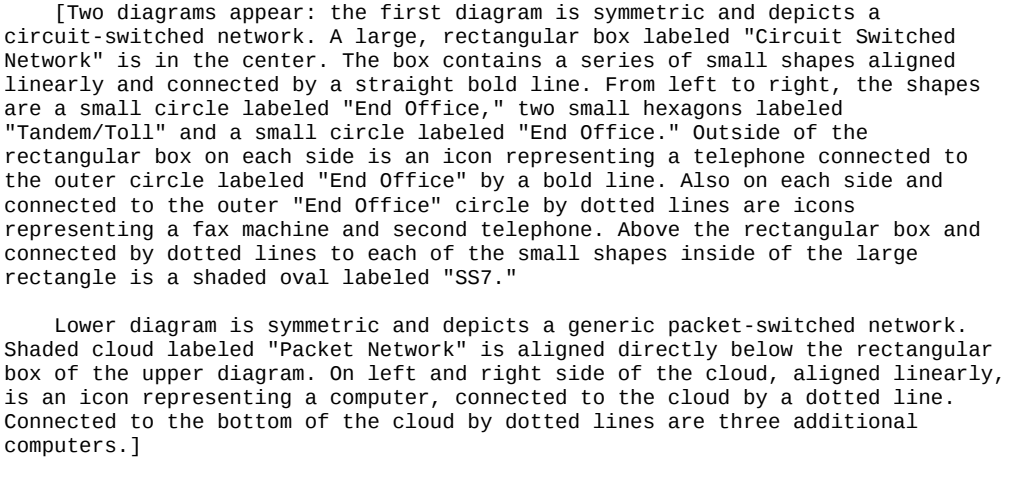
Deregulation of the telephone industry accelerated with the passage of the Telecommunications Act of 1996. The barriers that once restricted service providers to a specific geography or service offering, such as access or long distance, are disappearing. The opportunity created by opening up the $750 billion telephone services market has been attracting thousands of new service providers. Intense competition between new players and incumbents is driving down prices. With limited ability to reduce the cost structure of the public telephone network, profit margins for traditional telephone services are eroding. In response, service providers are seeking both new, creative and differentiated service offerings and the means to reduce their costs.

Simultaneously, the rapid adoption of the Internet is driving dramatic growth of data traffic. Today, a significant portion of this data traffic is carried over the traditional circuit-switched telephone network. However, the circuit-switched network, designed for voice traffic and built long before the advent of the Internet, is not suited to efficiently transport data traffic. In a circuit-switched network, a dedicated path, or circuit, is established for each call, reserving a fixed amount of capacity or bandwidth in each direction. The dedicated circuit is maintained for the duration of the call across all of the circuit switches spanning the path from origination to the destination of the call, even when no traffic is being sent. As a result, a circuit-switched architecture is highly inefficient for Internet applications, which tend to create large bursts of data traffic followed by long periods of silence.

In contrast, a packet network divides traffic into distinct units called packets, and routes each packet independently. By combining traffic from users with differing capacity demands at different times, packet networks more efficiently fill available network bandwidth with packets of data from many users, thereby reducing the bandwidth wasted due to silence from any single user. The volume of data traffic continues to increase as use of the Internet and the number of connected users grow, driving service providers to build large-scale, more efficient packet networks.

With voice traffic carried over the vast installed base of traditional circuit-switched networks, and data traffic carried over rapidly expanding packet networks, service providers are faced with the expense and complexity of building and maintaining parallel networks.

The following diagrams depict these parallel voice and data networks.



[Two diagrams appear: the first diagram is symmetric and depicts a circuit-switched network. A large, rectangular box labeled "Circuit Switched Network" is in the center. The box contains a series of small shapes aligned linearly and connected by a straight bold line. From left to right, the shapes are a small circle labeled "End Office," two small hexagons labeled "Tandem/Toll" and a small circle labeled "End Office." Outside of the rectangular box on each side is an icon representing a telephone connected to the outer circle labeled "End Office" by a bold line. Also on each side and connected to the outer "End Office" circle by dotted lines are icons representing a fax machine and second telephone. Above the rectangular box and connected by dotted lines to each of the small shapes inside of the large rectangle is a shaded oval labeled "SS7."

Lower diagram is symmetric and depicts a generic packet-switched network. Shaded cloud labeled "Packet Network" is aligned directly below the rectangular box of the upper diagram. On left and right side of the cloud, aligned linearly, is an icon representing a computer, connected to the cloud by a dotted line. Connected to the bottom of the cloud by dotted lines are three additional computers.]

THE NEED FOR, AND BENEFITS OF, COMBINING VOICE AND DATA NETWORKS

We believe significant opportunities exist in uniting these separate, parallel networks into a new integrated public network capable of transporting both voice and data traffic. Enormous potential savings can be realized by eliminating redundant or overlapping equipment purchases and reducing network operating costs. Also, combining traditional voice services with Internet or Web-based services in a single network is expected to enable new and powerful high-margin, revenue-generating service offerings such as single-number dialing, unified messaging, Internet click-to-talk, sophisticated call centers and other services.

The packet network is the platform for the new public network. The volume of data traffic has already eclipsed voice traffic and is growing much faster than voice. Packet architectures are more efficient at moving data more flexible, and reduce equipment and operating costs. The key to realizing the full potential of a converged, packet-based network is to enable the world's voice traffic to run over those networks.

Early attempts to develop new technologies to carry voice traffic over packet networks have included voice over Internet protocol, or VoIP, systems using a personal computer platform and devices that added VoIP capability to existing data devices such as remote access servers. While demonstrating the viability of transmitting voice over packet technology, these approaches have fallen far short of the quality, reliability and scalability required by the public telephone network.

These early VoIP systems have also lacked the ability to interoperate with the signaling infrastructure of the circuit-switched network. Without this signaling capability, VoIP applications cannot provide the consistent "look, sound and feel" of traditional telephone calls and are not well-suited to more complex applications such as voicemail, unified messaging and other value-added services.

The public telephone network is large, highly complex and generates significant revenues. According to International Data Corporation, a market research firm, service providers derive 90% of their revenues from voice services and only 10% from data services. Given service providers' substantial investment in, and dependence upon, traditional circuit-switched technology, their transition to the new public network will be gradual. During this transition, an immediate opportunity exists to reduce the burden on overloaded and expensive circuit-switched resources. Internet offload will allow modem-connected Internet calls to be identified and diverted from the circuit-switched network to the packet network, thus optimizing use of valuable network bandwidth.

With $45 billion spent on traditional circuit switches in 1999, according to Synergy Research Group, a market research firm, the market opportunity for providers of voice infrastructure is significant. For example, spending on infrastructure to enable just two applications in the new public network, VoIP and Internet offload, is projected to exceed $19 billion in 2003, up from virtually zero in 1999.

REQUIREMENTS FOR VOICE INFRASTRUCTURE PRODUCTS FOR THE NEW PUBLIC NETWORK

Users demand high levels of quality and reliability from the public telephone network, and service providers require a cost-efficient network that enables new revenue-generating services. As a result, voice infrastructure products for the new public network must satisfy the following requirements:

CARRIER-CLASS PERFORMANCE. Because they operate complex, mission-critical networks, service providers have clear infrastructure requirements. These include extremely high reliability, quality and interoperability. For example, service providers typically require equipment that complies with their 99.999% availability standard.

SCALABILITY AND DENSITY. Infrastructure solutions for the new public network face challenging scalability requirements. Service providers' central offices typically support tens or even hundreds of thousands of simultaneous calls. In order to be economically attractive, the new infrastructure must compare favorably with existing networks in terms of cost per port, space occupied, power consumption and cooling requirements.

COMPATIBILITY WITH STANDARDS AND EXISTING INFRASTRUCTURE. New infrastructure equipment and software must support the full range of telephone network standards, including signaling protocols such as SS7 and various physical interfaces such as ISDN, primary rate interface, or PRI, and T1. It must also support data networking protocols such as Internet protocol, or IP, and asynchronous transfer mode, or ATM, as well as newer protocols such as H.323, IPDC and SIP. When operating, the new equipment and software cannot hinder, and ideally should enhance, the capabilities of the existing infrastructure, for example, by alleviating Internet access bottlenecks.

INTELLIGENT SOFTWARE IN AN OPEN AND FLEXIBLE PLATFORM. The architecture for the new public network will decouple the capabilities of traditional circuit-switching equipment into robust hardware elements and highly intelligent software platforms that provide control, signaling and service creation capabilities. This approach will transform the closed, proprietary circuit-switched public telephone network into a flexible, open environment accessible to a wide range of software developers. Service providers and third-party vendors will be able to develop and implement new applications independent of switch vendors. Moreover, the proliferation of independent software providers promises to drive the creation of innovative voice and data services that could expand service provider revenues.

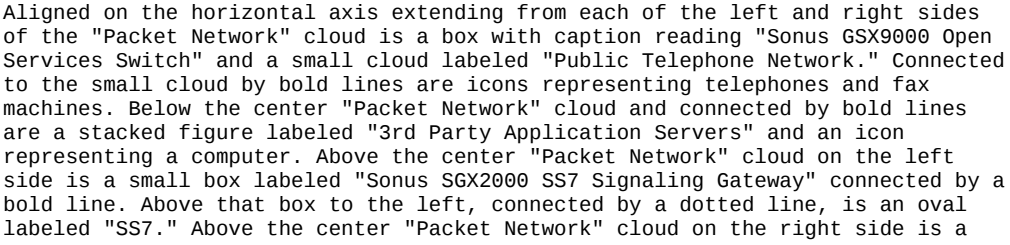
SIMPLE AND RAPID INSTALLATION, DEPLOYMENT AND SUPPORT. Infrastructure solutions must be easy to install, deploy, configure and manage. These attributes will enable rapid growth and effective management of dynamic and complex service provider networks.

THE SONUS SOLUTION

We develop, market and sell what we believe to be the first comprehensive suite of voice infrastructure products purpose-built for the deployment and management of voice and data services over the new public network. Our solution consists of four carrier-class products:

- the GSX9000 Open Services Switch;
- the PSX6000 SoftSwitch;
- the SGX2000 SS7 Signaling Gateway; and
- the System 9200 Internet offload solution.

These products are designed to offer high reliability, toll-quality voice, improved economics, interoperability, rapid deployment and an open architecture enabling the design and implementation of new services and applications. Our solution has been specifically designed to meet the requirements of the new public network. As shown in the following diagram, our products unite the voice and data networks, unleashing the potential of the new public network.



[Symmetric diagram with shaded cloud labeled "Packet Network" at the center. Aligned on the horizontal axis extending from each of the left and right sides of the "Packet Network" cloud is a box with caption reading "Sonus GSX9000 Open Services Switch" and a small cloud labeled "Public Telephone Network." Connected to the small cloud by bold lines are icons representing telephones and fax machines. Below the center "Packet Network" cloud and connected by bold lines are a stacked figure labeled "3rd Party Application Servers" and an icon representing a computer. Above the center "Packet Network" cloud on the left side is a small box labeled "Sonus SGX2000 SS7 Signaling Gateway" connected by a bold line. Above that box to the left, connected by a dotted line, is an oval labeled "SS7." Above the center "Packet Network" cloud on the right side is a small box labeled "Sonus PSX6000 SoftSwitch."]

CARRIER-CLASS PERFORMANCE. Our products are designed to offer the highest levels of quality, reliability and interoperability, including:

- full redundancy, enabling 99.999% availability;

- voice quality as good as, or superior to, today's circuit-switched network;

- system hardware designed for network equipment building standards, or NEBS, Level 3 compliance;

- a complete set of service features, addressing those found in the existing voice network and extending them to offer greater flexibility; and

- sophisticated network management and configuration capabilities.

COMPATIBILITY WITH STANDARDS AND EXISTING INFRASTRUCTURE. Our products are designed to be compatible with all applicable voice and data networking standards and interfaces, including:

- SS7 and other telephone network signaling protocols, including advanced services as well as simple call management and routing;

- IP, ATM, Ethernet and optical data networking standards;

- encoding, compression and call management standards including H.323, IPDC, SIP and others;

- voice coding standards such as G.711, and echo cancellation standard G.168; and

- all common interfaces, including T1, T3, E1 and PRI, and optical interfaces.

Our solution is designed to interface with legacy circuit-switching equipment, supporting the transparent flow of calls and other information between the circuit and packet networks. As a result, our products allow service providers to migrate to the new public network, while preserving their significant legacy infrastructure investments.

COST EFFECTIVENESS AND HIGH SCALABILITY. Our solution can be used to cost-effectively build packet-based switch configurations supporting a range from a few hundred calls to hundreds of thousands of simultaneous calls. In addition, the capital cost of our equipment is typically half that of traditional circuit-switched equipment. At the same time, our GSX9000 Open Services Switch offers unparalleled density, requires less than one-tenth of the space needed by circuit-switching implementations and requires significantly less power and cooling. This enables a significant reduction in expensive central office facilities' cost and allows service providers to deploy our equipment in locations where traditional circuit switches are not even an option given the limited space and environmental services.

The GSX9000 Open Services Switch can create central office space savings as shown below.

[Three dimensional diagram with a set of four rectangular bars parallel to one another and lined up evenly with caption reading "Traditional Circuit Switch (50,000 calls)." Depicted in front of the rectangular bars is a single, small, upright rectangular box labeled "Sonus GSX9000 Open Services Switch (50,000 calls)." Extending from each of the left and right sides of the small rectangular box back to the sides of the first of the four larger bars is a thin line.]

OPEN SOFTWARE ARCHITECTURE AND FLEXIBLE PLATFORM. Our Open Services Architecture, or OSA, is based on a software-centric design and a flexible platform, allowing rapid development of new products and services. For example, software intelligence in our System 9200 can detect Internet modem calls as they enter the network and divert them to remote access servers to be routed directly to a packet network. New services may be developed by us, by service providers or by any number of third parties including software developers and systems integrators. The OSA also facilitates the creation of services that were previously not possible on the circuit-switched network. In addition, we have partnered with a number of third-party application software developers to stimulate the growth of new applications available for our platform.

EASE OF INSTALLATION AND DEPLOYMENT. Our equipment and software can be installed and placed in service by our customers much more quickly than circuit-switching equipment. By offering comprehensive testing, configuration and management software, we expedite the deployment process as well as the ongoing management and operation of our products. We believe that typical installations of our solution require just weeks of time from product arrival to final testing, thereby reducing the cost of deployment and speeding the time to market for new services.

THE SONUS STRATEGY

Our objective is to be the primary supplier of voice infrastructure for the new public network. We intend to capitalize on our early technology and market lead to build the premier franchise in voice infrastructure solutions for the new public network. Principal elements of our strategy include:

LEVERAGE TECHNOLOGY LEADERSHIP TO ACHIEVE KEY SERVICE PROVIDER DESIGN WINS. As the first company to provide voice infrastructure for the new public network, we plan to achieve key design wins with market-leading service providers as they develop the architecture for their new voice networks. We expect service providers to select vendors that provide leading technology and the ability to maintain that technology leadership. Our equipment is an integral part of the network architecture, and achieving design wins will enable us to rapidly grow our business as these networks are deployed. We have already been awarded contracts by two major service providers: Global Crossing and Williams Communications. Furthermore, by working closely with our customers as they deploy these networks, we will gain valuable knowledge regarding their requirements, positioning us to develop product enhancements and extensions that address evolving service provider needs.

EXPAND AND BROADEN THE CUSTOMER BASE BY TARGETING SPECIFIC MARKET SEGMENTS. We plan to leverage our early success to penetrate new customer segments. We believe new and incumbent service providers will build the new public network at different rates. Initially, the new service providers, also called greenfield carriers, who are relatively unencumbered by legacy equipment, will be the most likely first purchasers of our equipment and software, as they compete aggressively with the incumbent service providers. Other newer entrants, such as competitive local exchange carriers, or CLECs, and Internet service providers, or ISPs, are also likely to be early adopters of our products. As competitive service providers achieve greater market presence and leverage the lower costs and advanced services inherent in packet-switching technology, we believe incumbents will face further competitive pressure, increasing the likelihood that, and pace at which, they will adopt our products.

EXPAND OUR GLOBAL SALES, MARKETING, SUPPORT AND DISTRIBUTION CAPABILITIES. Becoming the primary supplier of voice infrastructure for the new public network will require a strong worldwide presence. We are rapidly expanding our sales, marketing, support and distribution capabilities to address this need. We have recently opened regional sales offices in the United States and a European headquarters in the United Kingdom. In addition, we plan to augment our global direct

sales effort with international distribution partners. As a carrier-class solution provider, we are making a significant investment in professional services and customer support.

GROW OUR BASE OF SOFTWARE APPLICATIONS AND DEVELOPMENT PARTNERS. We have established and promote the Open Services Partner Alliance, or OSPA, which brings together a broad range of development partners to provide our customers with a variety of advanced services and application options. This alliance includes more than twenty members that are enabling new IP-based enhanced services, call processing, billing, provisioning, network management and operations systems. We plan to expand this program to maximize the services available to our customers, and speed their time to market.

LEVERAGE OUR TECHNOLOGY PLATFORM FROM THE CORE OF THE NETWORK OUT TO THE ACCESS EDGE. Our robust and sophisticated technology platform has been designed to operate at the heart of the largest networks in the world. From a fundamental position in this trunking infrastructure, we plan to extend our reach by moving outward to the access segments of the network. For example, we have already announced our System 9200 Internet offload solution, a turnkey product that gives service providers a cost effective means to manage Internet data traffic. Over time, we plan to expand our product offerings into other high-growth areas, such as business and residential access. This approach will allow our customers to design and execute a coordinated migration and expansion strategy as they build entirely new networks or transition from their legacy circuit-switched infrastructure.

ACTIVELY CONTRIBUTE TO THE STANDARDS DEFINITION AND ADOPTION PROCESS. To advance our technology and market leadership, we will continue to actively lead and contribute to standards bodies such as the International Softswitch Consortium, the Internet Engineering Task Force and the International Telecommunications Union. The definition of standards for the new public network is in an early stage and we intend to drive these standards to meet the requirements for an open, accessible, scalable and powerful new public network infrastructure.

PURSUE STRATEGIC ACQUISITIONS AND ALLIANCES. We intend to expand our products and services through selected acquisitions and alliances. These may include acquisitions of complementary products, technologies and businesses that further enhance our technology leadership or product breadth. We also believe that allying with companies providing complementary products or services for the new public network will enable us to bring greater value to our customers and extend our lead over potential competitors.

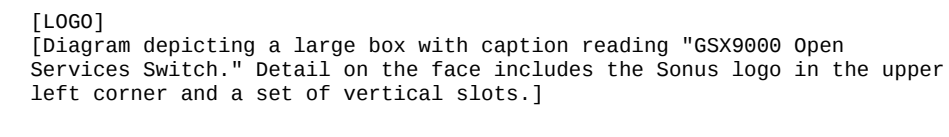
PRODUCTS

GSX9000 OPEN SERVICES SWITCH

Our GSX9000 Open Services Switch enables voice traffic to be transported over packet networks. Its carrier-class hardware is designed to be NEBS Level 3 compliant and provide 99.999% availability, with no single point of failure, and offers optional full redundancy and full hot-swap capability. It is powered from - -48VDC sources standard in central offices and attaches to the central office timing network. The basic building block of a GSX9000 is a shelf. Each shelf is 28" high, mounts in a standard 19" or 23" rack, and provides 16 slots for server and adapter modules. The first 2 slots are reserved for management modules, while the other 14 slots may be used for any mix of other module types. It supports the following interfaces:

- - T1;
- - T3;
- - E1;
- - OC3;
- - 100BaseT; and
- - OC12c/STM-4.

[LOGO]



[Diagram depicting a large box with caption reading "GSX9000 Open Services Switch." Detail on the face includes the Sonus logo in the upper left corner and a set of vertical slots.]

The GSX9000 is designed to deliver voice quality equal, or superior, to that of the public network. It is designed to support the G.711 approach used in circuit switches, and will deliver a number of other voice compression algorithms. It also is designed to provide world-class echo cancellation, conforming to the latest G.168 standard, on every circuit port. It automatically disables echo cancellation when it detects a modem signal. The GSX9000 is also designed to minimize delay, further enhancing perceived voice quality. The GSX9000 scales to the very large configurations required by major carriers. A single GSX9000 shelf can support up to 8,064 simultaneous calls. A single GSX9000 consisting of multiple shelves, can support 100,000 or more simultaneous calls. The GSX9000 is designed to operate with our PSX6000 SoftSwitch and with softswitches and network products offered by other vendors.

PSX6000 SOFTSWITCH

The PSX6000 SoftSwitch controls the operation of the GSX9000. It contains the service provider's specifications of the features to be used for each subscriber or group of subscribers, the available services and when to provide them, and the policies for routing calls across the packet core. The PSX6000 does not handle voice calls directly; instead, it controls a GSX9000 to implement the necessary services. The PSX6000 supports a broad range of carrier switching requirements and provides a platform upon which new services can be easily and quickly created and implemented. It allows carriers to deploy a circuit-switched, packet, or converged circuit/packet infrastructure with the capacity, reliability and intelligence that they require. Functions such as provisioning, service selection and routing can be centralized in a small number of PSX6000 Soft Switches.

The PSX6000 can reside in a wide range of standard hardware platforms to fit any size network. It may be replicated as required for high availability or to support very high call processing requirements. The service provider can designate a primary softswitch to control each GSX9000 gateway. In case of a failure of the primary PSX6000, the GSX9000 will transparently transfer control to another PSX6000 without affecting calls.

We believe the PSX6000 has the flexibility to support the requirements of the full range of service providers. Typical applications include Internet offload, PRI switching, domestic and international direct dial, business direct access, virtual private networks, and toll/tandem switching. The PSX6000 also facilitates new applications and services, integrating enhanced applications on IP-based platforms similar to Internet Web servers.

SGX2000 SS7 SIGNALING GATEWAY

The Sonus SGX2000 SS7 Signaling Gateway offers carriers a comprehensive and cost-effective SS7 signaling solution that provides interconnection between the traditional public telephone

network and elements of our Open Services Architecture. With the SGX2000, existing public telephone network voice switches can interact with the Sonus GSX9000 using the same signaling methods they would use with other circuit switches. This compatibility means that carriers can preserve their existing investment in infrastructure, and can offer their customers the full range of normal public telephone network services, such as 800 services and 1+ dialing in the new public network.

The SGX2000 also supports full access to SS7 service control points. Using the SGX2000, our products gain access to signal control processor-based applications such as 800 number translation and local number portability. This support allows service providers to preserve their application investment and ensure compatibility between applications common to both circuit and packet voice services. The SGX2000 supports up to 64 A-links to the SS7 network, and transports the SS7 messages to other network devices using IP protocols. The SGX2000 can be deployed in a redundant configuration, providing the performance and high availability required of a carrier-class SS7 solution.

SYSTEM 9200

Our System 9200 Internet offload solution is a turnkey product that allows local service providers, including CLECs, to more effectively handle the rapidly increasing amount of modem-originated Internet traffic traversing voice networks. The System 9200 is designed to divert Internet traffic from expensive circuit switches as calls enter the network, enabling service providers to improve network performance and significantly reduce network operating costs.

The System 9200 utilizes the technology delivered in the GSX9000, PSX6000 and SGX2000 to provide a smooth migration to packetized voice and data transport.

CUSTOMER SUPPORT AND PROFESSIONAL SERVICES

We believe our comprehensive technical customer support and professional services capabilities are an important element of our solution for customers. These services cover the full network lifecycle: planning; design; installation; and operations. We help our customers create or revise their business plans and design their networks and also provide the following:

- turnkey network installation services;

- 24-hour technical support; and

- educational services to customer personnel on the installation, operation and maintenance of our equipment.

We have established a technical assistance center at our headquarters in Westford, Massachusetts. The technical assistance center provides customers with periodic updates to our software and product documentation. We offer our customers a variety of service plans.

A key differentiator of our support activities is our professional services group, many members of which hold advanced technical degrees in electrical engineering or related disciplines. We offer a broad range of professional services, including sophisticated network deployment, assistance with logistics and project management support.

We also maintain a customer support laboratory in which customers can test the utility of our products for their specific applications and in which they can gain an understanding of the applications enabled by the converged network.

CUSTOMERS

Our target customer base includes competitive local exchange carriers, incumbent local exchange carriers, long distance carriers, Internet service providers, cable operators, wholesale carriers and PTTs, or international telephone companies. We have shipped products to several customers, including Global Crossing and Williams Communications.

SALES AND MARKETING

We sell our products through a direct sales force and resellers, including Lucent Technologies, who represents us as a sales agent for one of our customers, Global Crossing. In addition, we intend to establish relationships with selected original equipment manufacturers and other marketing partners in order to serve particular markets or geographies and provide our customers with opportunities to purchase our products in combination with related services and products. As of February 29, 2000, our sales and marketing organization consisted of 33 employees, of which 14 are located in our headquarters in Westford, Massachusetts, and 19 are located in sales and support offices around the United States and in the United Kingdom.

RESEARCH AND DEVELOPMENT

We believe that strong product development capabilities are essential to our strategy of enhancing our core technology, developing additional applications, incorporating that technology into new products and maintaining the comprehensiveness of our product and service offerings. Our research and development process is driven by the availability of new technology, market data and customer feedback. We have invested significant time and resources in creating a structured process for undertaking all product development projects.

We have assembled a team of highly skilled engineers with significant telecommunications and networking industry experience. Our engineers have experience in, and have been drawn, from leading computer data networking, telecommunications and multimedia companies. As of February 29, 2000, we had 100 employees responsible for research and development, of which 77 were software and quality assurance engineers and 23 were hardware engineers. Our engineering effort is focused on new applications and network access features, new network interfaces, improved scalability, quality, reliability and next generation technologies.

We have made, and intend to continue to make, a substantial investment in research and development. Research and development expenses were $299,000 for the period from inception on August 7, 1997 to December 31, 1997, $5.9 million for the year ended December 31, 1998 and $10.9 million for the year ended December 31, 1999.

COMPETITION

The market for voice infrastructure products for the new public network is intensely competitive, subject to rapid technological change and significantly affected by new product introductions and other market activities of industry participants. We expect competition to persist and intensify in the future. Our primary sources of competition include vendors of networking and telecommunications equipment, such as Cisco Systems, Lucent Technologies, Nortel Networks, Siemens and Tellabs, and private companies that have focused on our target market. In addition, Lucent Technologies, who represents us as a sales agent for one of our customers, Global Crossing, is also a direct competitor. Many of our competitors have significantly greater financial resources than we do and are able to devote greater resources to the development, promotion, sale and support of their products. In addition, many of our competitors have more extensive customer bases and broader customer relationships than we do, including relationships with our potential customers.

In order to compete effectively, we must deliver products that:

- provide extremely high network reliability and voice quality;

- scale easily and efficiently;

- interoperate with existing network designs and other vendors' equipment;

- provide effective network management;

- are accompanied by comprehensive customer support and professional services; and

- provide a cost-effective and space-efficient solution for service providers.

In addition, we believe that the ability to provide vendor-sponsored financing, which some of our competitors currently offer, is an important competitive factor in our market.

INTELLECTUAL PROPERTY

Our success and ability to compete are dependent on our ability to develop and maintain our technology and operate without infringing on the proprietary rights of others. We rely on a combination of patent, trademark, trade secret and copyright law and contractual restrictions to protect the proprietary aspects of our technology. These legal protections afford only limited protection for our technology. We presently have two patent applications pending in the United States and abroad and we cannot be certain that patents will be granted based on these or any other applications. We seek to protect our intellectual property by:

- protecting our source code for our software, documentation and other written materials under trade secret and copyright laws;

- licensing our software pursuant to signed license agreements, which impose restrictions on others' ability to use our software; and

- seeking to limit disclosure of our intellectual property by requiring employees and consultants with access to our proprietary information to execute confidentiality agreements.

Due to rapid technological change, we believe that factors such as the technological and creative skills of our personnel, new product developments and enhancements to existing products are more important than the various legal protections of our technology to establishing and maintaining technology leadership.

We have incorporated third-party licensed technology into our current products. From time to time, we may be required to license additional technology from third parties to develop new products or product enhancements. Third-party licenses may not be available or continue to be available to us on commercially reasonable terms. The inability to maintain any third-party licenses required in our current products, or to obtain any new third-party licenses to develop new products and product enhancements could require us to obtain substitute technology of lower quality or performance standards or at greater cost, and prevent us from making these products or enhancements, either of which could seriously harm the competitiveness of our products.

MANUFACTURING

Currently, we outsource the manufacturing of our products. Our contract manufacturers provide comprehensive manufacturing services, including assembly of our products and procurement of materials on our behalf. We perform final test and assembly at our Westford headquarters to ensure that we meet our internal and external quality standards. We believe that outsourcing our manufacturing will enable us to conserve working capital, better adjust manufacturing volumes to meet changes in demand and more quickly deliver products. At present, we purchase products

from our outside contract manufacturers on a purchase order basis. We may not be able to enter into long-term contracts on terms acceptable to us, if at all.

EMPLOYEES

As of February 29, 2000, we had a total of 176 employees, including 100 in research and development, 33 in sales and marketing, 21 in customer support and professional services, 15 in manufacturing and seven in finance and administration. Our employees are not represented by any collective bargaining unit. We believe our relations with our employees are good.

PROPERTIES

Our headquarters are currently located in a leased facility in Westford, Massachusetts, consisting of approximately 40,000 square feet under a lease that expires in 2004. We also lease short-term office space in Colorado and New Jersey. We believe that during 2000 we will need additional space to accommodate our growth and that this space will be available.

LEGAL PROCEEDINGS

We are not currently a party to any material litigation.

EXECUTIVE OFFICERS AND DIRECTORS

The following table sets forth our executive officers and directors, their respective ages and positions as of December 31, 1999.

NAME	AGE	POSITION
Rubin Gruber	55	Chairman of the Board of Directors
Hassan M. Ahmed	42	President, Chief Executive Officer and Director
Michael G. Hluchyj	45	Chief Technology Officer, Vice President and Secretary
Jeffrey Mayersohn	48	Vice President of Customer Support and Professional Services
Stephen J. Nill	48	Chief Financial Officer, Vice President of Finance and Administration and Treasurer
Gary A. Rogers	44	Vice President of Sales and Marketing
Frank T. Winiarski	57	Vice President of Manufacturing
Kwok P. Wong	42	Vice President of Engineering
Edward T. Anderson (1)	50	Director
Paul J. Ferri (1) (2)	61	Director
Paul J. Severino (1) (2)	53	Director

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(1) Member of audit committee.

(2) Member of compensation committee.

RUBIN GRUBER is one of our founders and has been a Director since November 1997 and Chairman of our Board of Directors since November 1998. From November 1997 until November 1998, Mr. Gruber was our President. Before founding Sonus, Mr. Gruber was a founder of VideoServer, Inc., now Ezenia!, Inc., a manufacturer of videoconference network equipment and from February 1992 until September 1996 served as Vice President of Business Development. Previously, Mr. Gruber was a founder and served as President of both Cambridge Telecommunications, Inc., a manufacturer of networking equipment, and Davox Corporation, a developer of terminals supporting voice and data applications, and served as a Senior Vice President of Bolt, Beranek and Newman Communications Corporation, a manufacturer of data communications equipment. Mr. Gruber also serves on the board of directors of the International SoftSwitch Consortium. Mr. Gruber holds a B.Sc. in mathematics from McGill University and a M.A. in mathematics from Wayne State University.

HASSAN M. AHMED is our President and Chief Executive Officer and has been a member of our Board of Directors since November 1998. From July 1998 to November 1998, Mr. Ahmed was Executive Vice President and General Manager of the Core Switching Division of Ascend Communications, Inc., a provider of wide area network switches and access data networking equipment, and from July 1997 until July 1998 was a Vice President and General Manager of the Core Switching Division. From June 1995 to July 1997, Mr. Ahmed was Chief Technology Officer and Vice President of Engineering for Cascade Communications Corp., a provider of wide area network switches. From 1993 until June 1995, Mr. Ahmed was a founder and President of WaveAccess, Inc., a supplier of wireless communications. Prior to that, he was an Associate Professor at Boston University, Engineering Manager at Analog Devices, a chip manufacturer, and director of VSLI Systems at Motorola Codex, a supplier of communications equipment. Mr. Ahmed

holds a B.S. and M.S. in engineering from Carleton University and a Ph.D. in engineering from Stanford University.

MICHAEL G. HLUCHYJ is one of our founders and has been our Chief Technology Officer and Vice President since November 1997. He also has been our Secretary since our inception, our President from August 1997 to November 1997, our Treasurer from inception until March 2000 and a Director from our inception until November 1998. From July 1994 until July 1997, he was Vice President and Chief Technology Officer at Summa Four, Inc., a supplier of switches for carrier networks. Previously, he was Director of Networking Research at Motorola Codex and on the technical staff at AT&T Bell Laboratories. Mr. Hluchyj holds a B.S. degree in engineering from the University of Massachusetts, and M.S. and Ph.D. degrees in engineering from the Massachusetts Institute of Technology.

JEFFREY MAYERSOHN has been our Vice President of Customer Support and Professional Services since July 1999. From March 1998 until July 1999, he was our Vice President of Carrier Relations. From June 1997 to March 1998, Mr. Mayersohn was a Senior Vice President at GTE Internetworking, an Internet service provider. From January 1995 to June 1997, he was with BBN Corporation, formerly Bolt, Beranek and Newman, Inc., and was a Vice President at the BBN Planet division, an Internet service provider. From 1978 to January 1995, he held a number of positions at Bolt, Beranek and Newman, Inc., including Senior Vice President of Engineering, Senior Vice President responsible for U.S. Government Networks and Vice President of Professional Services for BBN Communications Corporation, a wholly owned subsidiary. Mr. Mayersohn holds an A.B. in physics from Harvard College and a M.Phil. in physics from Yale University.

STEPHEN J. NILL has been our Chief Financial Officer and Vice President of Finance and Administration since September 1999 and our Treasurer since March 2000. From June 1994 until August 1999, he was Vice President of Finance and Chief Financial Officer of VideoServer, Inc., now Ezenia!, Inc. Previously he served at Lotus Development Corporation, a software supplier, as Corporate Controller and Chief Accounting Officer. Prior to that, Mr. Nill held various financial positions with Computervision, Inc., a supplier of workstation-based software, International Business Machines Corporation and Arthur Andersen LLP. Mr. Nill has a B.A. in accounting from New Mexico State University and a M.B.A. from Harvard University.

GARY A. ROGERS has been our Vice President of Sales and Marketing since March 1999. From February 1997 to March 1999, Mr. Rogers was Senior Vice President of Worldwide Sales and Operations at Security Dynamics, Inc., now RSA Security, Inc., a supplier of network security products. Previously, he served at Bay Networks, Inc., a provider of Internetworking communications products, as Vice President of International Sales from July 1996 to February 1997 and as Vice President of Europe, Middle East and Africa from 1994 until July 1996. Prior to that, he held sales and marketing positions with International Business Machines Corporation. Mr. Rogers holds a B.S. degree in mathematics from Dartmouth College and a M.B.A. from the University of Chicago.

FRANK T. WINIARSKI has been our Vice President of Manufacturing since July 1998. From June 1997 until June 1998, he was Vice President of Manufacturing at Net2Net, Inc., a supplier of network analyzers. From June 1992 until June 1997, he was Vice President of Manufacturing at VideoServer, Inc., now Ezenia!, Inc. Previously, Mr. Winiarski was Vice President of Manufacturing at Synernetics, a supplier of local area networks, Vice President of Operations at Ashton-Tate Corporation, a software supplier, and held various positions with Digital Equipment Corporation, a computer equipment manufacturer. He holds a B.S. in engineering from the University of Idaho and a M.B.A. from Boston University.

KWOK P. WONG is one of our founders and has been our Vice President of Engineering since November 1997. From 1991 to November 1997, he was director of software development at

VideoServer, Inc., now Ezenia!, Inc. Previously, Mr. Wong was Manager of Systems Networks Architecture at Bolt, Beranek and Newman Communications Corporation and was a software engineer at Davox Corporation. Mr. Wong has a B.S. in engineering and a M.S. in computer science from Northeastern University.

EDWARD T. ANDERSON has been a Director since November 1997. Mr. Anderson has been managing general partner of North Bridge Venture Partners, a venture capital firm, since 1994. Previously, he was a general partner for ABS Ventures, the venture capital affiliate of Alex Brown & Sons. He has a M.F.A. from the University of Denver and a M.B.A. from Columbia University.

PAUL J. FERRI has been a Director since November 1997. Mr. Ferri has been a general partner of Matrix Partners, a venture capital firm, since 1982. He also serves on the board of directors of Applix, Inc. and Sycamore Networks, Inc. Mr. Ferri has a B.S. in engineering from Cornell University, a M.S. in engineering from Polytechnic Institute of New York and a M.B.A. from Columbia University.

PAUL J. SEVERINO has been a Director since March 1999. Mr. Severino is a private investor. He has been Chairman of NetCentric Corporation, a provider of Internet telephony applications since January 1998 and was Acting Chief Executive Officer from January 1998 to March 1999. From November 1996 until January 1998, Mr. Severino was a private investor. From 1994 to October 1996, he was Chairman of Bay Networks, Inc. after its formation from the merger of Wellfleet Communications, Inc. and Synoptics Communications, Inc. Prior to that, he was a founder, President and Chief Executive Officer of Wellfleet Communications, Inc. He also serves on the board of directors of Interspeed, Inc., MCK Communications, Inc., Media 100, Inc., and Silverstream Software, Inc. Mr. Severino has a B.S. in engineering from Rensselaer Polytechnic Institute.

Each executive officer serves at the discretion of the board of directors and holds office until his or her successor is elected and qualified or until his or her earlier resignation or removal. There are no family relationships among any of our directors or executive officers. Each of the directors serves on the board of directors pursuant to the terms of an agreement that will terminate upon the closing of this offering.

ELECTION OF DIRECTORS

Following this offering, the board of directors will be divided into three classes, with members of each class serving for a staggered three-year term. Messrs. Ferri and Gruber will serve in the class whose term expires in 2001; Messrs. Ahmed and Severino will serve in the class whose term expires in 2002; and Mr. Anderson will serve in the class whose term expires in 2003. Upon the expiration of the term of a class of directors, directors in that class will be elected for three-year terms at the annual meeting of stockholders in the year in which their term expires.

COMPENSATION OF DIRECTORS

We reimburse directors for reasonable out-of-pocket expenses incurred in attending meetings of the board of directors. In March 2000, our board of directors granted to each of our non-employee directors an option exercisable for 10,000 shares of common stock, subject to vesting over a four-year period pursuant to our own 1997 Stock Incentive Plan. See "Certain Transactions--Common Stock Issuances" and "--Benefit Plans; 1997 Stock Incentive Plan."

BOARD COMMITTEES

The board of directors has established a compensation committee and an audit committee. The compensation committee, which consists of Messrs. Ferri and Severino, reviews executive salaries, administers bonuses, incentive compensation and stock plans, and approves the salaries

and other benefits of our executive officers. In addition, the compensation committee consults with our management regarding our benefit plans and compensation policies and practices.

The audit committee, which consists of Messrs. Anderson, Ferri and Severino, reviews the professional services provided by our independent accountants, the independence of our accountants from our management, our annual financial statements and our system of internal accounting controls. The audit committee also reviews other matters with respect to our accounting, auditing and financial reporting practices and procedures as it may find appropriate or may be brought to its attention.

COMPENSATION COMMITTEE INTERLOCKS AND INSIDER PARTICIPATION

Prior to the appointment of the compensation committee, our full board of directors, which includes Messrs. Gruber and Ahmed, was responsible for the functions of a compensation committee. Messrs. Gruber and Ahmed did not participate in deliberations regarding their own compensation. No interlocking relationship exists between any member of our board of directors or our compensation committee and any member of the board of directors or compensation committee of any other company, and none of these interlocking relationships have existed in the past.

EXECUTIVE COMPENSATION

The table below sets forth, for the year ended December 31, 1999, the compensation earned by:

- our Chairman of the Board of Directors;
- our Chief Executive Officer; and
- the other three most highly compensated executive officers who received annual compensation in excess of $100,000.

SUMMARY COMPENSATION TABLE

	ANNUAL COMPENSATION			LONG-TERM COMPENSATION AWARDS
NAME AND PRINCIPAL POSITION	SALARY	BONUS	ALL OTHER COMPENSATION	RESTRICTED STOCK AWARDS (3)
Rubin Gruber Chairman of the Board of Directors	$150,000	$ --	$ --	$ --
Hassan M. Ahmed President and Chief Executive Officer	186,417	75,000	--	--
Michael G. Hluchyj Chief Technology Officer, Vice President and Secretary	150,000	--	--	--
Jeffrey Mayersohn Vice President of Customer Support and Professional Services	150,000	--	--	--
Gary A. Rogers Vice President of Sales and Marketing	111,371(1)	--	99,107(2)	0(4)

(1) Represents the total amount of compensation Mr. Rogers received in fiscal 1999 for the portion of the year during which he was one of our executive officers. Mr. Rogers joined us in March 1999.

(2) Represents commission income.

(3) On December 31, 1999, the remaining number of shares of restricted common stock held by the above executive officers that had not vested and the value of this stock as of December 31, 1999, was as follows: Mr. Gruber: 908,124 shares, $; Mr. Ahmed: 2,031,804 shares, $; Mr. Hluchyj: 1,084,219 shares, $; Mr. Mayersohn: 487,500 shares, $; and Mr. Rogers: 625,000 shares, $. The value is based on the mid-point of the estimated public offering price range set forth on the cover page of this prospectus less the purchase price paid. The holders of these shares of restricted common stock will be entitled to receive any dividends we pay on our common stock.

(4) In April 1999, we sold 625,000 shares of restricted common stock to Mr. Rogers, subject to our right to repurchase at $0.20 per share, the then current fair market value of the common stock as determined by our board of directors. Our repurchase right lapses 20% one year from the date Mr. Rogers commenced employment and thereafter lapses an additional 1.6667% of the shares for each month of employment. There was no public trading market for the common stock in April 1999. Our board of directors determined the market value of the common stock based on various factors including the illiquid nature of an investment in our common stock, our historical performance, the preferences, including liquidation and redemption of our outstanding redeemable convertible preferred stock, our future prospects and the price for securities sold in arms' length issuances to third parties.

BENEFIT PLANS

1997 STOCK INCENTIVE PLAN

Our 1997 Stock Incentive Plan provides for the grant of incentive stock options, nonqualified stock options, restricted stock awards and stock grants to our employees, directors and consultants.

In March 2000, our board of directors approved, subject to stockholder approval, an amendment to increase the maximum number of shares of common stock reserved for issuance under our 1997 plan to 27,000,000. This maximum number of shares will increase, effective as of January 1, 2001 and each January 1 thereafter during the term of the plan, by an additional number of shares of common stock in an amount equal to the lesser of (1) 5% of the total number of shares of common stock issued and outstanding as of the close of business on December 31 of the preceding year or (2) a number of shares determined by our board of directors. As of December 31, 1999, we had 1,688,175 shares available for future grant under the 1997 Plan and have 13,307,494 shares outstanding, consisting of shares of restricted common stock and options for the purchase of 1,017,581 shares of common stock.

Our board of directors has authorized the compensation committee to administer our 1997 plan, including the granting of options and restricted stock to our executive officers. Subject to any applicable limitations contained in our 1997 plan, our board of directors, our compensation committee or executive officers to whom our board of directors delegates authority, as the case may be, selects the recipients of awards and determines:

- the number of shares of common stock covered by options and the dates upon which any option grants vest and become exercisable;

- the exercise price of options;

- the duration of options; and

- the number of shares of common stock subject to any restricted stock or other stock awards and the terms and conditions of these awards, including the conditions for repurchase, issue price and repurchase price.

Generally, options and restricted stock under the 1997 plan vest over four to five year periods from the date of grant. In the event of a merger, consolidation or other acquisition event resulting in a change in control of Sonus, outstanding options and restricted stock will accelerate in vesting by 12 months. Our board of directors may in its discretion accelerate the vesting of any options or restricted grant at any time. The restrictions on restricted stock granted to some of our executive officers lapse in full upon a change in control. Upon a change in control, the acquiring or successor corporation may assume or make substitutions for options or stock outstanding under our 1997 plan.

The board of directors may amend, modify, suspend or terminate our 1997 plan at any time, subject to applicable law and the rights of holders of outstanding options and restricted stock awards. Our 1997 plan will terminate in November 2007, unless the board of directors terminates it prior to that time.

2000 EMPLOYEE STOCK PURCHASE PLAN

Our 2000 Employee Stock Purchase Plan was adopted by our board of directors in March 2000, subject to stockholder approval. The purchase plan authorizes the issuance of up to a total of 1,200,000 shares of our common stock to participating employees. This number of shares will increase, effective as of January 1, 2001 and each January 1 thereafter during the term of the plan, by an additional number of shares of common stock in an amount equal to the lesser of (1) 2% of the total number of shares of common stock issued and outstanding as of the close of business on December 31 of the preceding year or (2) a number of shares determined by our board of directors. Unless terminated earlier by our board of directors, the purchase plan shall terminate in March 2010.

The employee stock purchase plan, which is intended to qualify under Section 423 of the Internal Revenue Code, will be implemented by a series of overlapping 24-month offering periods. New offering periods, other then the first offering period, will commence on March 1 and September 1 of each year. Each offering period will generally consist of four consecutive six-month purchase periods, and at the end of each six-month period an automatic purchase will be made for participants. The initial offering and initial purchase periods are expected to commence on the date of this offering. The 2000 employee stock purchase plan will be administered by the board of directors or by a committee appointed by the board. Employees of ours, or of any majority-owned subsidiary designated by the board, are eligible to participate if we or any subsidiary employs them for at least 20 hours per week and more than five months per year. Eligible employees may purchase common stock through payroll deductions, which in any event may not exceed 20% of an employee's compensation, at a price equal to the lower of 85% of the fair market value of the common stock at the beginning of each offering period or at the end of each purchase period. Employees may end their participation in the 2000 employee stock purchase plan at any time during an offering period and participation ends automatically on termination of employment.

Under the 2000 employee stock purchase plan, no employee shall be granted an option under the plan if immediately after the grant the employee would own stock and/or hold outstanding options to purchase stock equaling 5% or more of the total voting power or value of all classes of our stock. In addition, no employee shall be granted an option under the 2000 employee stock purchase plan if the option would permit the employee to purchase stock under all of our employee stock purchase plans in an amount that exceeds $25,000 of fair market value for each calendar year in which the option is outstanding at any time. In addition, no employee may purchase more

than 2,500 shares of common stock under the 2000 employee stock purchase plan in any one purchase period. If the fair market value of the common stock on a purchase date other than the final purchase date of an offering is less than the fair market value at the beginning of the offering period, each participant shall automatically be withdrawn from the offering period as of the purchase date and re-enrolled in a new 24 month offering period beginning on the first business day following the purchase date.

In the event of a merger, consolidation or other acquisition event resulting in any change of control of Sonus, each right to purchase stock under the 2000 employee stock purchase plan will be assumed or an equivalent right will be substituted by the successor corporation. Our board of directors will shorten any ongoing offering period, however, so that employees' rights to purchase stock under the 2000 employee stock purchase plan are exercised prior to the transaction in the event that the successor corporation refuses to assume each purchase right or to substitute an equivalent right. The board of directors has the power to amend or terminate the 2000 employee stock purchase plan and to change or terminate offering periods as long as any action does not adversely affect any outstanding rights to purchase stock. Our board of directors may amend or terminate the 2000 employee stock purchase plan or an offering period even if it would adversely affect outstanding options in order to avoid us incurring adverse accounting charges. We have not issued any shares under the 2000 employee stock purchase plan to date.

401(K) PLAN

On February 27, 1998, we adopted an employee savings and retirement plan, qualified under Section 401(k) of the Internal Revenue Code, covering all of our employees. Pursuant to the 401(k) plan, employees may elect to reduce their current compensation by up to the statutorily prescribed annual limit and have the amount of the reduction contributed to the 401(k) plan. We may make matching or additional contributions to the 401(k) plan in amounts to be determined annually by our board of directors. We have made no contributions to the 401(k) plan to date.

PREFERRED STOCK ISSUANCES

Since November 1997, we have issued and sold shares of Series A, Series B and Series C redeemable convertible preferred stock to the following persons and entities who are our executive officers, directors or 5% or greater stockholders. Upon the closing of this offering, each share of Series A, Series B and Series C redeemable convertible preferred stock will automatically convert into 2.5 shares of common stock. For more detail on shares to be held by these purchasers after conversion, see "Principal Stockholders."

INVESTOR	SERIES A PREFERRED STOCK	SERIES B PREFERRED STOCK	SERIES C PREFERRED STOCK
Matrix Partners and affiliated entities (1).....	2,100,000	600,000	230,266
North Bridge Venture Partners and affiliated entities (2).....	2,100,000	600,000	230,266
Charles River Ventures and affiliated entities.....	2,100,000	600,000	230,265
Bedrock Capital Partners and affiliated entities.....	275,000	1,180,000	124,088
Paul J. Severino.....	--	50,000	4,264
Rubin Gruber.....	25,000	--	--
Kwok P. Wong.....	25,000	--	--
Michael G. Hluchyj.....	20,000	--	--
Frank T. Winiarski.....	--	10,000	853

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(1) Composed of Matrix Partners V, L.P. and Matrix V Entrepreneurs Fund, L.P. with the general partner being Matrix V Management Co., L.L.C. Paul J. Ferri, one of our directors, is a general partner of Matrix V Management Co., L.L.C.

(2) Composed of North Bridge Venture Partners II, L.P. and North Bridge Venture Partners III, L.P. with the general partners being North Bridge Venture Management II, L.P. and North Bridge Venture Management III, L.P. Edward T. Anderson one of our directors, is a general partner of North Bridge Venture Management II and III, L.P.

SERIES A FINANCING. In November 1997 and July 1998, we issued an aggregate of 7,180,000 shares of Series A preferred stock to investors, including Rubin Gruber, Kwok P. Wong, Michael G. Hluchyj, and entities affiliated with Matrix Partners, North Bridge Venture Partners, Charles River Ventures and Bedrock Capital Partners. The per share purchase price for our Series A preferred stock was $1.00.

SERIES B FINANCING. In September 1998, December 1998, and May 1999, we issued an aggregate of 3,204,287 shares of Series B preferred stock to investors, including Paul J. Severino, Frank T. Winiarski, and entities affiliated with Matrix Partners, North Bridge Venture Partners, Charles River Ventures and Bedrock Capital Partners. The per share purchase price for our Series B preferred stock was $5.00.

SERIES C FINANCING. In September 1999, November 1999 and December 1999, we issued an aggregate of 1,939,681 shares of Series C preferred stock to investors, including Paul J. Severino, Frank T. Winiarski, and entities affiliated with Matrix Partners, North Bridge Venture Partners, Charles River Ventures and Bedrock Capital Partners. The per share purchase price for our Series C preferred stock was $11.81.

COMMON STOCK ISSUANCES

The following table presents information regarding our issuances of common stock to some of our executive officers. We issued the shares of common stock set forth below in the table pursuant to stock restriction agreements with each of the executive officers that give us rights to repurchase all or a portion of the shares at their original purchase price in the event the officer ceases to be our employee. Some of these stock restriction agreements prohibit us from repurchasing some or all of the shares following a change in control of Sonus.

NAME	DATE OF ISSUANCE	NUMBER OF SHARES	AGGREGATE PURCHASE PRICE
Rubin Gruber	11/10/97	3,212,499	$ 12,850
Hassan M. Ahmed	11/4/98	3,212,499	321,250
Michael G. Hluchyj	8/26/97	2,409,375	1,000
Jeffrey Mayersohn	4/14/98	749,999	15,000
Gary A. Rogers	4/30/99	625,000	125,000
Stephen J. Nill	9/1/99	562,500	112,500

Other executive officers have purchased shares of common stock pursuant to similar stock restriction agreements for aggregate purchase prices that did not exceed $60,000 for any one executive officer. The repurchase right generally lapses as to 20% of the shares approximately one year from the hire date of the executive officer and thereafter lapses as to an additional 1.6667% of the shares for each month of employment completed by the executive officer.

In April 1999, we issued 87,500 shares of common stock for $17,500 to Paul J. Severino, one of our directors. See "Certain Transactions-Preferred Stock Issuances" herein for additional issuances of stock to Mr. Severino.

AGREEMENTS WITH EXECUTIVE OFFICERS

On November 4, 1998, in connection with the issuance of restricted common stock, we loaned $257,000 to Hassan M. Ahmed, our President and Chief Executive Officer. The loan is secured by 2,570,000 shares of our restricted common stock and bears interest at 8% per year. The loan is due upon the earlier of November 4, 2003 or 180 days after his shares are eligible for public sale.

The Company has agreed to pay Mr. Ahmed a $275,000 bonus upon the closing of this offering or upon a merger, consolidation or other acquisition event resulting in any change of control of Sonus for a minimum purchase price of $100 million.

On September 1, 1999, in connection with the issuance of restricted common stock, we loaned $110,250 to Stephen J. Nill, our Chief Financial Officer, Vice President of Finance and Administration and Treasurer. The loan is secured by 562,500 shares of his common stock and is a full recourse note, which bears interest at 8% per year. The loan is due upon the earlier of September 1, 2004 or 180 days after his shares are eligible for public sale.

We believe that all of the transactions set forth above were made on terms no less favorable to us than could have been obtained from unaffiliated third parties. All future transactions, including loans between us and our officers, directors, principal stockholders and their affiliates will be approved by a majority of the board of directors, including a majority of the independent and disinterested directors on the board of directors, and will be on terms no less favorable to us than could be obtained from unaffiliated third parties.

PRINCIPAL STOCKHOLDERS

The following table sets forth information regarding beneficial ownership of our common stock as of January 31, 2000 and as adjusted to reflect the sale of our common stock offered in this prospectus by:

- each person who beneficially owns more than 5% of the outstanding shares of our common stock;
- each of our executive officers listed in the Summary Compensation Table;
- each of our directors; and
- all of our executive officers and directors as a group.

Beneficial ownership is determined in accordance with the rules of the Securities and Exchange Commission, and includes voting and investment power with respect to shares. Unless otherwise indicated below, to our knowledge, all persons named in the table have sole voting and investment power with respect to their shares of common stock, except to the extent authority is shared by spouses under applicable law.

The number of shares of common stock deemed outstanding prior to this offering includes shares of common stock outstanding as of January 31, 2000, after giving effect to the sale in March 2000 of shares of Series D redeemable convertible preferred stock and assuming conversion of all outstanding shares of redeemable convertible preferred stock into common stock. The number of shares of common stock deemed outstanding after this offering includes the shares that are being offered for sale by us in this offering. Unless otherwise indicated below, the address of each listed stockholder is care of Sonus Networks, Inc., 5 Carlisle Road, Westford, Massachusetts 01886.

NAME OF BENEFICIAL OWNER	NUMBER OF SHARES BENEFICIALLY OWNED	PERCENTAGE OF COMMON STOCK BEFORE OFFERING	PERCENTAGE OF COMMON STOCK AFTER OFFERING
Paul J. Ferri (1)	7,325,664	13.5%	
Matrix Partners and affiliated entities (1)	7,325,664	13.5%	
Edward T. Anderson (2)	7,325,664	13.5%	
North Bridge Venture Partners and affiliated entities (2)	7,325,664	13.5%	
Charles River Ventures and affiliated entities (3)	7,325,661	13.5%	
Bedrock Capital Partners and affiliated entities (4)	3,947,718	7.3%	
Hassan M. Ahmed (5)	3,182,499	5.9%	
Michael G. Hluchyj (6)	2,384,375	4.4%	
Rubin Gruber (7)	1,355,916	2.5%	
Jeffrey Mayersohn (8)	699,999	1.3%	
Gary A. Rogers (9)	625,000	1.2%	
Paul J. Severino (10)	153,160	*	
All executive officers and directors as a group (11 persons)(11)	25,431,515	46.9%	

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* Less than 1% of the outstanding common stock.

(1) Composed of 6,593,097 shares held by Matrix Partners V, L.P. and 732,567 shares held by Matrix V Entrepreneurs Fund, L.P. Matrix V Management Co., L.L.C. is the general partner of the aforementioned entities. Paul J. Ferri is a director of Sonus and is a general partner of Matrix V Management Co., L.L.C. Mr. Ferri disclaims beneficial ownership of the shares held by these

entities except to the extent of his proportionate pecuniary interest therein. The address of Mr. Ferri and Matrix Partners and its affiliated entities is in care of Matrix V Management Co., L.L.C., 1000 Winter Street, Suite 4500, Waltham, MA 02154.

(2) Composed of 6,300,017 shares held by North Bridge Venture Partners II, L.P. and 1,025,647 shares held by North Bridge Venture Partners III, L.P. The general partner for North Bridge Venture Partners II, L.P is North Bridge Venture Management II, L.P., and for North Bridge Venture Partners III, L.P. is North Bridge Venture Management III, L.P. Edward T. Anderson is a director of Sonus, and is a general partner of both North Bridge Venture Management II and III, L.P. Mr. Anderson disclaims beneficial ownership of the shares held by these entities except to the extent of his proportionate pecuniary interest therein. The address of Mr. Anderson and North Bridge Venture Partners and its affiliated entities is in care of North Bridge Venture Management II and III, L.P., 950 Winter Street, Suite 4600, Waltham, MA 02451.

(3) Composed of 7,193,032 shares held by Charles River Partnership VIII, L.P. and 132,629 shares held by Charles River VIII-A LLC. Charles River Partnership VIII GP Limited Partnership is the general partner of the Charles River Partnership VIII, L.P. and Charles River Friends VIII, Inc. is the manager of Charles River VIII-A LLC. The address of Charles River Ventures and its affiliated entities is in care of Charles River VIII GP Limited Partnership, 1000 Winter Street, Suite 3300, Waltham, MA 02154.

(4) Composed of 3,657,832 shares held by Bedrock Capital Partners I, L.P., 127,464 shares held by VBW Employee Bedrock Fund, and 162,422 shares held by Credit Suisse First Boston Bedrock Fund, L.P. Bedrock General Partner I, LLC is the general partner for these entities. The address of Bedrock Capital Partners and its affiliated entities is in care of Bedrock General Partner, I, L.L.C., One Boston Place, Suite 3310, Boston, MA 02108.

(5) Includes 2,570,000 shares subject to a stock pledge agreement in favor of Sonus. Includes 2,379,374 shares which are subject to our right to repurchase at cost upon cessation of employment, includes 400,000 shares held by the Hassan and Aliya Family Trust on behalf of his minor children, and 566,666 shares held by the 1999 Hassan M. Ahmed Generation Skipping Family Trust on behalf of his family. Mr. Ahmed disclaims beneficial ownership of the shares held by these trusts.

(6) Includes 1,044,063 shares which are subject to our right to repurchase at cost upon cessation of employment and includes an aggregate of 705,000 shares held by the Michael G. and Theresa M. Hluchyj Family Trust and by his minor children. Mr. Hluchyj disclaims beneficial ownership of the shares held by the Michael G. and Theresa M. Hluchyj Family Trust and his minor children.

(7) Includes 875,226 shares which are subject to our right to repurchase at cost upon cessation of employment.

(8) Includes 474,999 shares which are subject to our right to repurchase at cost upon cessation of employment and includes 181,817 shares held by the Mayersohn Seamonson Family Irrevocable Trust-1999 on behalf of his minor children. Mr. Mayersohn disclaims beneficial ownership of the shares held by the Mayersohn Seamonson Family Irrevocable Trust-1999.

(9) All of the shares are subject to our right to repurchase at cost upon cessation of employment.

(10) Includes 17,000 shares for the benefit of Mr. Severino's minor child under the Massachusetts Uniform Transfer to Minors Act.

(11) Includes 6,763,771 shares which are subject to our right to repurchase at cost upon cessation of employment by executive officers.

DESCRIPTION OF CAPITAL STOCK

GENERAL

After this offering, we will be authorized to issue 300,000,000 shares of common stock, $0.001 par value, per share, and 5,000,000 shares of undesignated preferred stock, $0.01 par value per share. As of , 2000, there were shares of common stock outstanding held by stockholders of record, assuming conversion of all shares of the redeemable convertible preferred stock into common stock. Based on the number of shares outstanding as of that date and giving effect to the issuance of the shares of common stock offered by us in this offering, there will be shares of common stock outstanding upon the closing of the offering.

COMMON STOCK

Holders of our common stock are entitled to one vote for each share held on all matters submitted to a vote of the stockholders and do not have cumulative voting rights. Accordingly, holders of a majority of the shares voted can elect all of the directors then standing for election. Holders of common stock are entitled to receive ratably any dividends that may be declared by the board of directors out of legally available funds, subject to any preferential dividend rights of any outstanding preferred stock. Upon our liquidation, dissolution or winding up, the holders of common stock are entitled to receive ratably our net assets available after the payment of all debts and other liabilities and subject to the prior rights of any outstanding preferred stock. Holders of common stock have no preemptive, subscription, redemption or conversion rights. The outstanding shares of common stock are, and the shares offered by us in this offering will be upon receipt of payment for such shares, fully paid and non-assessable. The rights, preferences and privileges of holders of common stock are subject to, and may be adversely affected by, the rights of holders of shares of any series of preferred stock that we may designate and issue in the future without further stockholder approval. Upon the closing of this offering, there will be no shares of preferred stock outstanding.

PREFERRED STOCK

Upon the closing of this offering, our board of directors will be authorized without further stockholder approval to issue from time to time up to an aggregate of 5,000,000 shares of preferred stock in one or more series. The board of directors has discretion to fix or alter the designations, preferences, rights, qualifications, limitations or restrictions of the shares of each series, including the dividend rights, dividend rates, conversion rights, voting rights, term of redemption including sinking fund provisions, redemption price or prices, liquidation preferences and the number of shares constituting any series or designations of such series without further vote or action by the stockholders.

The purpose of authorizing the board of directors to issue preferred stock and determine its rights and preferences is to eliminate delays associated with a stockholder vote on specific issuances. The issuance of preferred stock, while providing desirable flexibility in connection with possible acquisitions and other corporate purposes, could make it more difficult for a third party to acquire, or could discourage a third party from acquiring, a majority of our outstanding voting stock. We have no current plans to issue any shares of preferred stock.

DELAWARE LAW AND CHARTER AND BY-LAW PROVISIONS; ANTI-TAKEOVER EFFECTS

We are subject to the provisions of Section 203 of the General Corporation Law of Delaware. In general, the statute prohibits a publicly held Delaware corporation from engaging in a "business combination" with an "interested stockholder" for a period of three years after the date of the transaction in which the person became an interested stockholder, unless the business combination

is approved in a prescribed manner. A "business combination" includes mergers, asset sales and other transactions resulting in a financial benefit to the interested stockholder. Subject to some exceptions, an "interested stockholder" is a person who, together with affiliates and associates, owns, or within three years did own, 15% or more of the corporation's voting stock.

Our amended and restated certificate of incorporation and amended and restated by-laws to be effective on the closing of this offering provide:

- that the board of directors be divided into three classes, as nearly equal in size as possible, with staggered three-year terms;

- that directors may be removed only for cause by the affirmative vote of the holders of at least 66 2/3% of the shares of our capital stock entitled to vote; and

- that any vacancy on the board of directors, however occurring, including a vacancy resulting from an enlargement of the board, may only be filled by vote of a majority of the directors then in office.

The classification of the board of directors and the limitations on the removal of directors and filling of vacancies could have the effect of making it more difficult for a third party to acquire, or of discouraging a third party from acquiring, Sonus.

Our amended and restated certificate of incorporation and amended and restated by-laws also provide that, after the closing of this offering:

- any action required or permitted to be taken by the stockholders at an annual meeting or special meeting of stockholders may only be taken if it is properly brought before the meeting and may not be taken by written action in lieu of a meeting; and

- special meetings of the stockholders may only be called by the chairman of the board of directors, the president or by the board of directors.

Our amended and restated by-laws provide that, in order for any matter to be considered "properly brought" before a meeting, a stockholder must comply with requirements regarding advance notice to us. These provisions could delay until the next stockholders' meeting stockholder actions that are favored by the holders of a majority of our outstanding voting securities. These provisions may also discourage another person or entity from making a tender offer for our common stock, because the person or entity, even if it acquired a majority of our outstanding voting securities, would be able to take action as a stockholder, such as electing new directors or approving a merger, only at a duly called stockholders meeting, and not by written consent.

Delaware's corporation law provides generally that the affirmative vote of a majority of the shares entitled to vote on any matter is required to amend a corporation's certificate of incorporation or by-laws, unless a corporation's certificate of incorporation or by-laws, as the case may be, requires a greater percentage. Our amended and restated certificate of incorporation requires the affirmative vote of the holders of at least 66 2/3% of the shares of our capital stock entitled to vote to amend or repeal any of the provisions of our amended and restated certificate of incorporation described in the preceding paragraphs. Generally, our amended and restated by-laws may be amended or repealed by a majority vote of the board of directors or the holders of a majority of the shares of our capital stock issued and outstanding and entitled to vote. To amend our amended and restated by-laws regarding special meetings of stockholders, written actions of stockholders in lieu of a meeting and the election, removal and classification of members of the board of directors requires the affirmative vote of the holders of at least 66 2/3% of the shares of our capital stock entitled to vote. The stockholder vote would be in addition to any separate class vote that might in the future be required pursuant to the terms of any series of preferred stock that might be outstanding at the time any of these amendments are submitted to stockholders.

LIMITATION OF LIABILITY AND INDEMNIFICATION

Our amended and restated certificate of incorporation provides that our directors and officers shall be indemnified by us to the fullest extent authorized by Delaware law. This indemnification would cover all expenses and liabilities reasonably incurred in connection with their services for or on behalf of us. In addition, our amended and restated certificate of incorporation provides that our directors will not be personally liable for monetary damages to us for breaches of their fiduciary duty as directors, unless they violated their duty of loyalty to us or our stockholders, acted in bad faith, knowingly or intentionally violated the law, authorized illegal dividends or redemptions or derived an improper personal benefit from their action as directors.

REGISTRATION RIGHTS

After this offering, the holders of approximately shares of common stock will be entitled to rights with respect to the registration of such shares under the Securities Act. Set forth below is a summary of the registration rights of the holders of our Series A preferred stock, Series B preferred stock, Series C preferred stock and Series D preferred stock, each of which will convert into common stock upon the closing of this offering.

DEMAND REGISTRATION RIGHTS. At any time after the earlier of November 18, 2000, or the closing of our initial public offering, the holders of 35% or more of the shares having registration rights may request that we register shares of common stock. We will be obligated to effect only two registrations pursuant to a demand request by holders of registrable shares.

We are not obligated to effect a registration 90 days prior to, and extending up to three months from the effective date of, the anticipated filing of the most recent company-initiated registration. We are also not required to effect a stockholder requested registration, if the requested registration of shares would adversely affect, to our material harm, any other activity in which we are then engaged. We may only delay stockholder initiated registrations once every twelve months.

PIGGYBACK REGISTRATION RIGHTS. Stockholders with registration rights have unlimited rights to request that shares be included in any company-initiated registration of common stock other than registrations of shares issued in connection with employee benefit plans, shares issued in connection with business combinations subject to Rule 145 under the Securities Act, convertible debt or other specified registrations. If the registration that we initiate involves an underwriting, however, we will not be obligated to register any shares unless the holders agree to the terms of the underwriting agreement. It may also be necessary, at the discretion of the lead underwriter, to limit the number of selling stockholders in the offering, as a result of which stockholders may only be able to register a pro rata number of registrable shares, if any.

FORM S-3 REGISTRATION RIGHTS. Once we have become eligible, under applicable securities laws, to file a registration statement on Form S-3, which will not be until at least 12 months after the closing of this offering, one or more stockholders may request that we file a registration statement on Form S-3, so long as the shares offered have an aggregate offering price of at least $1,000,000 based on the public market price at the time of the request. We will be obligated to effect no more than three registrations pursuant to an S-3 request by holders of registration rights.

FUTURE GRANTS OF REGISTRATION RIGHTS. Without the consent of current stockholders owning at least 66 2/3% of the then outstanding registrable shares, we may not grant further registration rights that would be on more favorable terms than the existing registration rights.

TRANSFERABILITY. The registration rights are transferable upon transfer of registrable securities and notice by the holder to us of the transfer, provided that, in most cases, a minimum of

shares, as adjusted for splits, dividends, recapitalizations and similar events, are transferred and the transferee or assignee assumes the rights and obligations of the transferor of the shares.

TERMINATION. The registration rights will terminate as to any particular registrable securities on the date on which the shares are sold pursuant to a registration statement and are no longer subject to Rule 144 under the Securities Act. The piggyback registration rights will expire upon the third anniversary of this offering.

WAIVER. The holders of shares of common stock entitled to the registration rights described above have agreed not to exercise such rights for a period of 180 days after the date of this prospectus.

TRANSFER AGENT AND REGISTRAR

The Transfer Agent and Registrar for our common stock will be .

LISTING

We have filed an application for our common stock to be quoted on the Nasdaq National Market under the symbol "SONS".

SHARES ELIGIBLE FOR FUTURE SALE

Upon completion of the offering, we will have shares of common stock outstanding, or shares if the underwriters' over-allotment option is exercised in full, in each case, assuming no exercise of options after , 2000. Of this amount, the shares offered by this prospectus will be available for immediate sale in the public market as of the date of this prospectus. Approximately additional shares will be available for sale in the public market following the expiration of lock-up agreements with the representatives of our underwriters, subject in some cases to compliance with the volume and other limitations of Rule 144. If the underwriters waive the lock-up agreements within the first 90 days after the date of this prospectus, an additional shares will be available for sale in the public market 90 days following the date of this prospectus, subject in some cases to compliance with the volume and other limitations of Rule 144.

In general, under Rule 144 as currently in effect, a person who has beneficially owned shares, including shares attributed to them, for at least one year is entitled to sell within any three-month period commencing 90 days after the date of this prospectus a number of shares that does not exceed the greater of

- 1% of the then outstanding shares of common stock, which will be equal to approximately shares immediately after the offering; or

- the average weekly trading volume during the four calendar weeks preceding the sale, subject to the filing of a Form 144 with respect to the sale.

A person, or persons whose shares are aggregated, who is not deemed to have been an affiliate of Sonus at any time during the 90 days immediately preceding the sale and who has beneficially owned his or her shares for at least two years is entitled to sell such shares pursuant to Rule 144(k) without regard to the limitations described above. Persons deemed to be affiliates must always sell pursuant to Rule 144, even after the applicable holding periods have been satisfied.

We are unable to estimate the number of shares that will be sold under Rule 144, since this will depend on the market price for our common stock, the personal circumstances of the sellers and other factors. Any future sale of substantial amounts of the common stock in the open market may adversely affect the market price of the common stock we are offering.

We have also agreed not to issue any shares during the 180-day lock-up period without the consent of the representatives of the underwriters, except that we may, without such consent, issue or sell shares under our 1997 Stock Incentive Plan and 2000 Employee Stock Purchase Plan.

Any of our employees, consultants or advisors who purchased shares pursuant to a written compensatory plan or other agreement is entitled to rely on the resale previsions of Rule 701, which permits non-affiliates to sell their Rule 701 shares without having to comply with the public information, holding period, volume limitation or notice provisions of Rule 144 and permits affiliates to sell their Rule 701 shares without having to comply with the Rule 144 holding period restrictions, in each case commencing 90 days after the date of this prospectus.

We intend to file a registration statement on Form S-8 under the Securities Act within days after the completion of the offering to register the shares of common stock issued or reserved for future issuance under our 1997 Stock Incentive Plan, thus permitting the resale of such shares by non-affiliates in the public market without restriction under the Securities Act. As of February 29, 2000, there were a total of approximately shares of outstanding common stock and options to purchase shares of common stock under our 1997 Stock Incentive Plan.

In addition, some of our stockholders have registration rights with respect to approximately shares of common stock and common stock equivalents. Registration of these registrable

shares under the Securities Act would result in those shares becoming freely tradeable without restriction under the Securities Act. See "Description of Capital Stock-Registration Rights."

LOCK-UP AGREEMENTS

Our officers, directors, stockholders and optionholders holding or having the right to acquire an aggregate of approximately shares of our common stock have entered into lock-up agreements in connection with this offering. These lock-up agreements provide that these persons will not offer, sell, contract to sell, grant any option to purchase or otherwise dispose of our common stock or any securities exercisable for or convertible into our common stock owned by them for a period of 180 days after the date of this prospectus without the prior written consent of Goldman, Sachs & Co. These lock-up agreements do not restrict the transfer of shares of our common stock purchased under the directed share program in connection with this offering or in the open market following the date of this prospectus.

However, if the reported last sale price of our common stock on the Nasdaq National Market is greater than twice the initial public offering price per share for 20 of the 30 consecutive trading days ending on the last trading day preceding the 90(th) day after the date of this prospectus, then 15% of the securities subject to lock-up agreements as of the date of this prospectus will be released from the transfer restrictions of the lock-up agreements. The release of these securities will occur on the 90(th) day after the date of this prospectus or, if the 90(th) day after the date of this prospectus would fall within the period beginning on September 12, 2000 and continuing until and including the second trading day after the release of our operating results for the quarter ending on September 30, 2000, the release will occur on the 20(th) trading day after the end of the preceding period if the reported last sale price of our common stock on the Nasdaq National Market is greater than twice the initial public offering price per share for the 20 of the 30 consecutive trading days ending on the trading day preceding the 20(th) trading day.

In addition, if the reported last sale price of our common stock on the Nasdaq National Market is greater than twice the initial public offering price per share for 20 of the 30 consecutive trading days ending on the second trading day after the date of the public release of our operating results for the quarter ending September 30, 2000, an additional 25% of the securities subject to lock-up agreements as of the date of this prospectus will be released from the transfer restrictions of the lock-up agreements. The release of these securities will occur on the third trading day after the date of the public release of our operating results for the quarter ending September 30, 2000.

LEGAL MATTERS

The validity of the shares of common stock we are offering will be passed upon for us by Bingham Dana LLP, Boston, Massachusetts. As of February 29, 2000, partners at Bingham Dana LLP owned shares of Series A, Series B and Series C redeemable convertible preferred stock, which will convert into an aggregate of 87,210 shares of common stock upon the completion of this offering. Some legal matters in connection with this offering will be passed upon for the underwriters by Ropes & Gray, Boston, Massachusetts.

EXPERTS

The financial statements of Sonus Networks, Inc. as of December 31, 1998 and 1999 and for the period from inception (August 7, 1997) through December 31, 1997, for the years ended December 31, 1998 and 1999 and for the period from inception to December 31, 1999 included in this prospectus and elsewhere in this registration statement have been audited by Arthur Anderson LLP, independent public accountants, as indicated in their report with respect thereto, and are included in reliance upon the authority of said firm as experts in giving said report.

ADDITIONAL INFORMATION

We have filed with the Securities and Exchange Commission a registration statement on Form S-1, including exhibits and schedules, under the Securities Act with respect to the shares to be sold in the offering. This prospectus does not contain all the information set forth in the registration statement. For further information with respect to us and the shares to be sold in the offering, reference is made to the registration statement and the exhibits and schedules attached to the registration statement. Statements contained in this prospectus as to the contents of any contract, agreement or other document referred to are not necessarily complete. As a result of this offering, we will become subject to the information and reporting requirements of the Securities Exchange Act of 1934, as amended and will file annual, quarterly and current reports, proxy statements and other information with the Commission.

You may read and copy all or any portion of the registration statement or any reports, statements or other information that we file at the Commission's Public Reference Room at 450 Fifth Street, N.W., Washington, D.C. 20549. You can request copies of these documents, upon payment of a duplicating fee, by writing to the Commission. Please call the Commission at 1-800-SEC-0330 for further information on the operation of the Public Reference Room. Our Commission filings, including the registration statement, are also available to you on the Commission's Web site http://WWW.SEC.GOV.

UNDERWRITING

Sonus and the underwriters named below have entered into an underwriting agreement with respect to the shares being offered. Subject to certain conditions, each underwriter has severally agreed to purchase the number of shares indicated in the following table. Goldman, Sachs & Co., Dain Rauscher Incorporated, FleetBoston Robertson Stephens Inc. and J.P. Morgan Securities Inc. are the representatives of the underwriters.

UNDERWRITERS	NUMBER OF SHARES
Goldman, Sachs & Co.	
Dain Rauscher Incorporated	
FleetBoston Robertson Stephens Inc.	
J.P. Morgan Securities Inc.	
Total	

If the underwriters sell more shares than the total number set forth in the table above, the underwriters have an option to buy up to an additional shares from us to cover these sales. They may exercise that option for 30 days. If any shares are purchased pursuant to this option, the underwriters will severally purchase shares in approximately the same proportion as set forth in the table above.

The following table shows the per share and total underwriting discounts and commissions to be paid to the underwriters by Sonus. These amounts are shown assuming both no exercise and full exercise of the underwriters' option to purchase additional shares.

	PAID BY SONUS	
	NO EXERCISE	FULL EXERCISE
Per Share	$	$
Total	$	$

Shares sold by the underwriters to the public will initially be offered at the initial public offering price set forth on the cover of this prospectus. Any shares sold by the underwriters to securities dealers may be sold at a discount of up to $ per share from the initial public offering price. Any of these securities dealers may resell any shares purchased from the underwriters to other brokers or dealers at a discount of up to $ per share from the initial public offering price. If all the shares are not sold at the initial public offering price, the representatives may change the offering price and the other selling terms.

Sonus has agreed with the underwriters not to dispose of or hedge any of its common stock or securities convertible into or exchangeable for shares of common stock during the period from the date of this prospectus continuing through the date 180 days after the date of this prospectus, except with the prior written consent of the representatives. See "Shares Eligible for Future Sale" for a discussion of transfer restrictions.

Prior to this offering, there has been no public market for the common stock. The initial public offering price will be negotiated among Sonus and the representatives. Among the factors to be considered in determining the initial public offering price of the shares, in addition to prevailing market conditions, will be our historical performance, estimates of our business potential and earnings prospects, an assessment of our management and the consideration of the above factors in relation to market valuation of companies in related businesses.

We have applied to have common stock approved for quotation on the Nasdaq National Market under the symbol "SONS".

In connection with this offering, the underwriters may purchase and sell shares of common stock in the open market. These transactions may include short sales, stabilizing transactions and purchases to cover positions created by short sales. Short sales involve the sale by the underwriters of a greater number of shares than they are required to purchase in this offering. Stabilizing transactions consist of some bids or purchases made for the purpose of preventing or retarding a decline in the market price of the common stock while this offering is in progress.

The underwriters also may impose a penalty bid. This occurs when a particular underwriter repays to the underwriters a portion of the underwriting discounts received by it because the representatives have repurchased shares sold by or for the account of that particular underwriter in stabilizing or short covering transactions.

These activities by the underwriters may stabilize, maintain or otherwise affect the market price of the common stock. As a result, the price of the common stock may be higher than the price that otherwise might exist in the open market. If these activities are commenced, they may be discontinued by the underwriters at any time. These transactions may be effected on The Nasdaq National Market, in the over-the-counter market or elsewhere.

The underwriters do not expect sales to discretionary accounts to exceed five percent of the total number of shares offered.

At the request of Sonus, the underwriters are reserving up to shares of common stock for sale at the initial public offering price under a directed share program. Sonus currently expects that shares under the directed share program will be offered for sale to some of our directors, officers, employees and associates. In addition, under the directed share program, the underwriters have reserved up to approximately shares of common stock for sale to Williams Communications, one of our stockholders and customers. The number of shares available for sale to the general public will be reduced by the number of reserved shares sold. Any reserved shares not so purchased will be offered by the underwriters to the general public on the same basis as other shares offered hereby.

Sonus estimates that its share of the total expenses of this offering, excluding underwriting discounts and commissions, will be approximately $ million.

Sonus has agreed to indemnify the several underwriters against certain liabilities, including liabilities under the Securities Act of 1933.

SONUS NETWORKS, INC.
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REPORT OF INDEPENDENT PUBLIC ACCOUNTANTS

To the Board of Directors and Stockholders of
Sonus Networks, Inc.:

We have audited the accompanying balance sheets of Sonus Networks, Inc. (a Delaware corporation in the development stage) as of December 31, 1998 and 1999, and the related statements of operations, redeemable convertible preferred stock and stockholders' equity (deficit) and cash flows for the period from inception (August 7, 1997) to December 31, 1997, for the years ended December 31, 1998 and 1999 and for the period from inception to December 31, 1999. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with auditing standards generally accepted in the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Sonus Networks, Inc. as of December 31, 1998 and 1999, and the results of its operations and its cash flows for the period from inception (August 7, 1997) to December 31, 1997, for the years ended December 31, 1998 and 1999, and for the period from inception to December 31, 1999, in conformity with accounting principles generally accepted in the United States.

Arthur Andersen LLP

Boston, Massachusetts
March 10, 2000

SONUS NETWORKS, INC.
(A DEVELOPMENT STAGE COMPANY)

BALANCE SHEETS
(IN THOUSANDS, EXCEPT SHARE DATA)

	DECEMBER 31,		PRO FORMA DECEMBER 31,
	1998	1999	1999
			(UNAUDITED)
ASSETS			
CURRENT ASSETS:			
Cash and cash equivalents	$ 3,584	$ 8,885	$33,595
Marketable securities	12,917	14,681	14,681
Inventories	--	2,210	2,210
Other current assets	162	298	298
Total current assets	16,663	26,074	50,784
PROPERTY AND EQUIPMENT, net of accumulated depreciation and amortization	1,506	4,269	4,269
OTHER ASSETS, net of accumulated amortization of $57 and $301 at December 31, 1998 and 1999, respectively	247	439	439
	$18,416	$30,782	$55,492
LIABILITIES, REDEEMABLE CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' EQUITY (DEFICIT)			
CURRENT LIABILITIES:			
Current portion of long-term obligations	$ 430	$ 1,336	$ 1,336
Accounts payable	422	1,412	1,412
Accrued expenses	490	2,691	2,691
Deferred revenue	--	1,031	1,031
Total current liabilities	1,342	6,470	6,470
LONG-TERM OBLIGATIONS, less current portion	1,220	3,402	3,402
COMMITMENTS (NOTE 7)			
REDEEMABLE CONVERTIBLE PREFERRED STOCK, $0.01 par value; 15,000,000 shares authorized; 10,334,287 and 12,323,968 shares issued and outstanding at December 31, 1998 and 1999, respectively; no shares authorized, issued and outstanding, pro forma	22,951	46,109	--
STOCKHOLDERS' EQUITY (DEFICIT):			
Preferred stock, $0.01 par value; 5,000,000 shares authorized, pro forma; none issued and outstanding, pro forma	--	--	--
Common stock, $0.001 par value; 70,000,000 shares authorized; 16,523,353 and 21,836,974 shares issued and outstanding at December 31, 1998 and 1999, respectively; 54,156,048 shares issued and outstanding, pro forma	17	22	54
Capital in excess of par value	589	25,611	96,438
Deficit accumulated during the development stage	(7,446)	(33,882)	(33,922)
Stock subscriptions receivable	(257)	(346)	(346)
Deferred compensation	--	(16,604)	(16,604)
Total stockholders' equity (deficit)	(7,097)	(25,199)	45,620
	$18,416	$30,782	$55,492

THE ACCOMPANYING NOTES ARE AN INTEGRAL PART OF THESE FINANCIAL STATEMENTS.

SONUS NETWORKS, INC.
(A DEVELOPMENT STAGE COMPANY)

STATEMENTS OF OPERATIONS
(IN THOUSANDS, EXCEPT SHARE AND PER SHARE DATA)

	PERIOD FROM INCEPTION (AUGUST 7, 1997) TO DECEMBER 31, 1997	YEAR ENDED DECEMBER 31, 1998	YEAR ENDED DECEMBER 31, 1999	PERIOD FROM INCEPTION (AUGUST 7, 1997) TO DECEMBER 31, 1999
OPERATING EXPENSES:				
Manufacturing	$ --	$ --	$ 1,861	$ 1,861
Research and development	299	5,853	10,863	17,015
Sales and marketing	--	438	5,610	6,048
General and administrative	187	937	1,785	2,909
Amortization of deferred compensation (Note 8(d))	--	--	4,255	4,255
Total operating expenses	486	7,228	24,374	32,088
LOSS FROM OPERATIONS	(486)	(7,228)	(24,374)	(32,088)
Interest expense	--	(78)	(224)	(302)
Interest income	25	392	711	1,128
NET LOSS	(461)	(6,914)	(23,887)	(31,262)
Beneficial conversion feature of Series C preferred stock	--	--	(2,500)	(2,500)
NET LOSS APPLICABLE TO COMMON STOCKHOLDERS	$(461)	$ (6,914)	$ (26,387)	$(33,762)
NET LOSS PER SHARE (NOTE 1(N)):				
Basic and diluted	$ --	$ (4.27)	$ 5.53	
Pro forma basic and diluted			$ (0.75)	
SHARES USED IN COMPUTING NET LOSS PER SHARE (NOTE 1(N)):				
Basic and diluted	--	1,619,289	4,774,763	
Pro forma basic and diluted			32,062,786	

THE ACCOMPANYING NOTES ARE AN INTEGRAL PART OF THESE FINANCIAL STATEMENTS.

SONUS NETWORKS, INC.
(A DEVELOPMENT STAGE COMPANY)

STATEMENTS OF REDEEMABLE CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' EQUITY (DEFICIT)
FOR THE PERIOD FROM INCEPTION (AUGUST 7, 1997) TO DECEMBER 31, 1999
(IN THOUSANDS, EXCEPT SHARE DATA)

	REDEEMABLE CONVERTIBLE PREFERRED STOCK		COMMON STOCK		CAPITAL IN EXCESS OF PAR
	SHARES	VALUE	SHARES	PAR VALUE	VALUE
BALANCE, INCEPTION (AUGUST 7, 1997)	--	$ --	--	$ --	$ --
Issuance of common stock to founders for cash	--	--	8,205,231	8	18
Issuance of Series A preferred stock for cash and conversion of notes payable, net of issuance costs of $28	7,100,000	7,100	--	--	--
Issuance of common stock to employees for cash and subscription receivable	--	--	1,031,875	1	20
Net loss	--	--	--	--	--
BALANCE, DECEMBER 31, 1997	7,100,000	7,100	9,237,106	9	38
Payments on subscription receivable	--	--	--	--	--
Issuance of Series A preferred stock for cash and issuance costs of $2	80,000	80	--	--	--
Issuance of Series B preferred stock for cash and issuance costs of $40	3,154,287	15,771	--	--	--
Issuance of common stock to officer for cash and stock subscriptions receivable	--	--	3,212,499	4	317
Issuance of common stock to employees for cash	--	--	4,073,748	4	175
Compensation associated with the granting of stock options and sale of restricted common stock	--	--	--	--	59
Net loss	--	--	--	--	--
BALANCE, DECEMBER 31, 1998	10,334,287	22,951	16,523,353	17	589
Issuance of Series B preferred stock to a director for cash and issuance costs of $9	50,000	250	--	--	--
Issuance of Series C preferred stock for cash and issuance costs of $40	1,939,681	22,908	--	--	--
Beneficial conversion feature of Series C preferred stock	--	--	--	--	2,500
Payments on subscriptions receivable	--	--	--	--	--
Issuance of common stock to employees, officers and a director for cash and stock subscriptions receivable	--	--	5,076,871	5	1,498
Exercise of stock options	--	--	236,750	--	16
Compensation associated with the grant of stock options and sale of restricted common stock	--	--	--	--	149
Deferred compensation related to stock option grants and sale of restricted common stock	--	--	--	--	20,859
Amortization of deferred compensation	--	--	--	--	--
Net loss	--	--	--	--	--
BALANCE, DECEMBER 31, 1999	12,323,968	46,109	21,836,974	22	25,611
Issuance of Series D preferred stock for cash and issuance costs of $40 (unaudited)	1,509,154	24,750	--	--	--
Pro forma conversion of preferred stock to common stock (unaudited)	(13,833,122)	(70,859)	32,319,074	32	70,827
PRO FORMA BALANCE, DECEMBER 31, 1999 (UNAUDITED)	--	$ --	54,156,048	$ 54	96,438

	DEFICIT ACCUMULATED DURING THE DEVELOPMENT STAGE	STOCK SUBSCRIPTIONS RECEIVABLE	DEFERRED COMPENSATION	TOTAL STOCKHOLDERS' EQUITY (DEFICIT)
BALANCE, INCEPTION (AUGUST 7, 1997)	$ --	$ --	$ --	$ --
Issuance of common stock to founders for cash	(1)	--	--	25
Issuance of Series A preferred stock for cash and conversion of notes payable, net of issuance costs of $28	(28)	--	--	(28)
Issuance of common stock to employees for cash and subscription receivable	--	(4)	--	17
Net loss	(461)	--	--	(461)
BALANCE, DECEMBER 31, 1997	(490)	(4)	--	(447)
Payments on subscription receivable	--	4	--	4
Issuance of Series A preferred stock for cash and issuance costs of $2	(2)	--	--	(2)
Issuance of Series B preferred stock for cash and issuance costs of $40	(40)	--	--	(40)
Issuance of common stock to officer for cash and				

stock subscriptions receivable	--	(257)	--	64
Issuance of common stock to employees for cash	--	--	--	179
Compensation associated with the granting of stock options and sale of restricted common stock	--	--	--	59
Net loss	(6,914)	--	--	(6,914)
BALANCE, DECEMBER 31, 1998	(7,446)	(257)	--	(7,097)
Issuance of Series B preferred stock to a director for cash and issuance costs of $9	(9)	--	--	(9)
Issuance of Series C preferred stock for cash and issuance costs of $40	(40)	--	--	(40)
Beneficial conversion feature of Series C preferred stock	(2,500)	--	--	--
Payments on subscriptions receivable	--	21	--	21
Issuance of common stock to employees, officers and a director for cash and stock subscriptions receivable	--	(110)	--	1,393
Exercise of stock options	--	--	--	16
Compensation associated with the grant of stock options and sale of restricted common stock	--	--	--	149
Deferred compensation related to stock option grants and sale of restricted common stock	--	--	(20,859)	--
Amortization of deferred compensation	--	--	4,255	4,255
Net loss	(23,887)	--		(23,887)
BALANCE, DECEMBER 31, 1999	(33,882)	(346)	(16,604)	(25,199)
Issuance of Series D preferred stock for cash and issuance costs of $40 (unaudited)	(40)	--	--	(40)
Pro forma conversion of preferred stock to common stock (unaudited)	--	--	--	70,859
PRO FORMA BALANCE, DECEMBER 31, 1999 (UNAUDITED)	$(33,922)	$(346)	$(16,604)	$ 45,620

THE ACCOMPANYING NOTES ARE AN INTEGRAL PART OF THESE FINANCIAL STATEMENTS.

SONUS NETWORKS, INC.
(A DEVELOPMENT STAGE COMPANY)

STATEMENTS OF CASH FLOWS
(IN THOUSANDS)

	PERIOD FROM INCEPTION (AUGUST 7, 1997) TO DECEMBER 31, 1997	YEAR ENDED DECEMBER 31, 1998	YEAR ENDED DECEMBER 31, 1999	PERIOD FROM INCEPTION (AUGUST 7, 1997) TO DECEMBER 31, 1999
CASH FLOWS FROM OPERATING ACTIVITIES:				
Net loss	$ (461)	$(6,914)	$(23,887)	$(31,262)
Adjustment to reconcile net loss to net cash used in operating activities--				
Depreciation and amortization	11	466	1,632	2,109
Compensation expense associated with the grant of stock options and issuance of restricted common stock	--	59	149	208
Amortization of deferred compensation	--	--	4,255	4,255
Changes in current assets and liabilities--				
Inventories	--	--	(2,210)	(2,210)
Other current assets	(30)	(132)	(136)	(298)
Accounts payable	229	193	990	1,412
Accrued expenses	96	394	2,201	2,691
Deferred revenue	--	--	1,031	1,031
Net cash used in operating activities	(155)	(5,934)	(15,975)	(22,064)
CASH FLOWS FROM INVESTING ACTIVITIES:				
Purchases of property and equipment	(347)	(1,577)	(4,151)	(6,075)
Maturities of marketable securities	--	7,295	22,020	29,315
Purchases of marketable securities	--	(20,212)	(23,784)	(43,996)
Other assets	(14)	(292)	(436)	(742)
Net cash used in investing activities	(361)	(14,786)	(6,351)	(21,498)
CASH FLOWS FROM FINANCING ACTIVITIES:				
Proceeds from sale of common stock	42	243	1,393	1,678
Proceeds from exercise of stock options	--	--	16	16
Net proceeds from issuance of preferred stock	6,847	15,809	23,109	45,765
Payment of stock subscriptions receivable	--	4	21	25
Proceeds from long-term obligations	8	1,749	3,609	5,366
Payments on long-term obligations	--	(107)	(521)	(628)
Proceeds from notes payable	225	--	--	225
Net cash provided by financing activities	7,122	17,698	27,627	52,447
NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	6,606	(3,022)	5,301	8,885
CASH AND CASH EQUIVALENTS, BEGINNING OF PERIOD	--	6,606	3,584	--
CASH AND CASH EQUIVALENTS, END OF PERIOD	$6,606	$ 3,584	$ 8,885	$ 8,885
SUPPLEMENTAL DISCLOSURE OF CASH FLOW INFORMATION:				
Cash paid during the period for interest	$ --	$ 78	$ 208	$ 286
SUPPLEMENTARY DISCLOSURE OF NONCASH TRANSACTIONS:				
Conversion of notes payable to preferred stock	$ 225	$ --	$ --	$ 225
Issuance of common stock for subscriptions receivable	$ 4	$ 257	$ 110	$ 371

THE ACCOMPANYING NOTES ARE AN INTEGRAL PART OF THESE FINANCIAL STATEMENTS.

SONUS NETWORKS, INC.
(A DEVELOPMENT STAGE COMPANY)

NOTES TO FINANCIAL STATEMENTS

DECEMBER 31, 1999

(1) OPERATIONS AND SIGNIFICANT ACCOUNTING POLICIES

Sonus Networks, Inc. (Sonus), a company in the development stage, was incorporated on August 7, 1997 and is the leading provider of voice infrastructure products to the new public network. Our hardware and software enable customers to deploy an integrated packet based network carrying voice and data traffic.

Sonus is subject to risks common to technology-based companies including, but not limited to, the development of new technology, development of markets and distribution channels, dependence on key personnel, and the ability to obtain additional capital as needed to meet its product plans. Sonus has a limited operating history and, due to Sonus' stage of development, it has incurred significant operating losses since inception. To date Sonus has been funded principally by private equity financings. Sonus' ultimate success is dependent upon its ability to raise additional capital and to successfully develop and market its products. In March 2000, Sonus issued 1,509,154 shares of Series D redeemable convertible preferred stock resulting in net proceeds of approximately $24,710,000 and filed for an initial public offering (IPO) of its common stock (see Note 11).

The accompanying financial statements reflect the application of certain significant accounting policies as described in this note and elsewhere in the accompanying financial statements and notes.

(A) PRO FORMA PRESENTATION (UNAUDITED)

The unaudited pro forma balance sheet and statement of redeemable convertible preferred stock and stockholders' equity (deficit) as of December 31, 1999 reflects (i) the sale of 1,509,154 shares of Series D redeemable convertible preferred stock in March 2000 and the receipt of $24,710,000 in net proceeds (see Note 11) and (ii) the automatic conversion of all outstanding shares of Series A, B, C and D redeemable convertible preferred stock into an aggregate of 32,319,074 shares of common stock which will occur upon the closing of Sonus' proposed IPO.

(B) CASH EQUIVALENTS AND MARKETABLE SECURITIES

Cash equivalents are stated at cost plus accrued interest, which approximates market value, and have maturities of three months or less at the date of purchase.

Marketable securities are classified as held-to-maturity, as Sonus has the intent and ability to hold to maturity. Marketable securities are reported at amortized cost. Cash equivalents and marketable securities are invested in highly rated government securities. There have been no gains or losses to date.

(C) CONCENTRATIONS OF CREDIT RISK AND LIMITED SUPPLIERS

The financial instruments that potentially subject Sonus to concentrations of credit risk are cash and marketable securities. Sonus has no significant off-balance-sheet concentrations such as foreign exchange contracts, options contracts or other foreign hedging arrangements. The majority of Sonus' cash is maintained with a commercial bank.

Certain components and software licenses from third-parties used in Sonus' products are procured from a single source. The failure of a supplier, including a subcontractor, to deliver on schedule could delay or interrupt Sonus' delivery of products and thereby adversely affect Sonus' revenues and operating results.

(D) INVENTORIES

Inventories are stated at the lower of cost (first-in, first-out basis) or market.

(E) PROPERTY AND EQUIPMENT

Property and equipment are stated at cost, net of accumulated depreciation and amortization. Expenditures for maintenance and repairs are charged to expense as incurred, whereas major betterments are capitalized as additions to property and equipment. Sonus provides for depreciation and amortization using the straight-line method and charges to operations amounts estimated to allocate the cost of the assets over their estimated useful lives.

(F) OTHER ASSETS

Other assets include licenses for certain technology embedded in Sonus' products. These licenses are amortized over the lesser of their useful lives or the term of the license.

(G) REVENUE RECOGNITION

Sonus recognizes revenue from product sales to end users and resellers upon shipment, provided there are no uncertainties regarding acceptance, persuasive evidence of an arrangement exists, the sales price is fixed or determinable and collection of the related receivable is probable. If uncertainties exist, Sonus recognizes revenue when those uncertainties are resolved. Service revenue is recognized as the services are performed or ratably over the terms of the service contracts. Amounts collected prior to satisfying the above revenue recognition criteria are reflected as deferred revenue. Warranty costs are estimated and recorded by Sonus at the time of product revenue recognition.

(H) SOFTWARE DEVELOPMENT COSTS

Sonus accounts for its software development costs in accordance with Statement of Financial Accounting Standards (SFAS) No. 86, ACCOUNTING FOR THE COSTS OF COMPUTER SOFTWARE TO BE SOLD, LEASED OR OTHERWISE MARKETED. Accordingly, the costs for the development of new software and substantial enhancements to existing software are expensed as incurred until technological feasibility has been established, at which time any additional costs would be capitalized. Sonus has determined that technological feasibility is established at the time a working model of the software is completed. Because Sonus believes its current process for developing software is essentially completed concurrently with the establishment of technological feasibility, no costs have been capitalized to date.

(I) STOCK-BASED COMPENSATION

Sonus uses the intrinsic value-based method of Accounting Principles Board Opinion No. 25, ACCOUNTING FOR STOCK ISSUED TO EMPLOYEES, to account for all of its employee stock-based compensation plans and uses the fair value method to account for all non-employee stock-based compensation.

(J) COMPREHENSIVE LOSS

Sonus applies Financial Accounting Standards Board (FASB) SFAS No. 130, REPORTING COMPREHENSIVE INCOME. The comprehensive loss for the period from inception (August 7, 1997) to December 31, 1997 and for the years ended December 31, 1998 and 1999 does not differ from the reported loss.

(K) FAIR VALUE OF FINANCIAL INSTRUMENTS

The carrying amounts of Sonus' financial instruments, which include cash equivalents, marketable securities, stock subscriptions receivable, accounts payable, accrued expenses and long-term obligations, approximate their fair value.

(L) USE OF ESTIMATES

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of expenses during the reporting period. Actual results could differ from those estimates.

(M) NEW PRONOUNCEMENTS

In June 1998, the FASB issued SFAS No. 133, ACCOUNTING FOR DERIVATIVE INSTRUMENTS AND HEDGING ACTIVITIES, which establishes accounting and reporting standards for derivative instruments, including certain derivative instruments embedded in other contracts, and for hedging activities. It requires that an entity recognize all derivatives as either assets or liabilities in the balance sheet and measure those instruments at fair value. Pursuant to SFAS No. 137, ACCOUNTING FOR DERIVATIVE INSTRUMENTS AND HEDGING ACTIVITIES--DEFERRAL OF THE EFFECTIVE DATE OF FASB NO. 133, SFAS No. 133 is effective in fiscal year 2001. SFAS No. 133 is not expected to have a material impact on Sonus' financial condition or results of operations.

(N) NET LOSS PER SHARE

Basic net loss per share is computed by dividing the net loss for the period by the weighted average number of unrestricted common shares outstanding during the period. Diluted net loss per share is computed by dividing the net loss for the period by the weighted average number of unrestricted common shares and potential common stock outstanding during the period, if dilutive. Potential common stock is comprised of restricted shares of common stock and the incremental common shares issuable upon the exercise of stock options. Shares of common stock issuable upon the conversion of Sonus' redeemable convertible preferred stock have also been excluded

from the date of issuance. In accordance with Securities and Exchange Commission (SEC) Staff Accounting Bulletin No. 98, Earnings Per Share in an Initial Public Offering, Sonus determined there were no nominal issuances of Sonus' stock prior to Sonus' initial public offering. For the period from inception through December 31, 1999 there were no unrestricted outstanding shares of common stock.

Pro forma basic and diluted net loss per share for the year ended December 31, 1999 is computed using the weighted average number of unrestricted common shares outstanding, including the pro forma effects of the automatic conversion of Sonus' Series A, B and C redeemable convertible preferred stock into shares of Sonus' common stock which will occur upon the closing of Sonus' proposed IPO, as if such conversion occurred at the date of original issuance. There were no dilutive shares of potential common stock for this period.

The following table sets forth the computation of basic and diluted net loss per share and pro forma basic and diluted net loss per share:

	PERIOD FROM INCEPTION (AUGUST 7, 1997) TO DECEMBER 31, 1997	YEAR ENDED DECEMBER 31, 1998	YEAR ENDED DECEMBER 31, 1999
	(IN THOUSANDS, EXCEPT SHARE AND PER SHARE DATA)		
Net loss applicable to common stockholders.....	$ (461)	$ (6,914)	$ (26,387)
Historical--			
Weighted average common shares outstanding.....	3,900,329	11,800,382	19,153,503
Less weighted average restricted common shares outstanding.....	(3,900,329)	(10,181,093)	(14,378,740)
Shares used in computing basic and diluted net loss per share.....	--	1,619,289	4,774,763
Basic and diluted net loss per share.....	$ --	$ (4.27)	$ (5.53)

	YEAR ENDED DECEMBER 31, 1999
	(IN THOUSANDS, EXCEPT SHARE AND PER SHARE DATA)
Net loss.....	$ (23,887)
Pro forma--	
Shares used in computing basic and diluted net loss per share.....	4,774,763
Weighted average number of shares assumed upon conversion of redeemable convertible common stock.....	27,288,023
Shares used in computing pro forma basic and diluted net loss per share.....	32,062,768
Pro forma basic and diluted net loss per share.....	$ (0.75)

Restricted shares of common stock and options to purchase 125,000, 557,500 and 1,017,581 shares of common stock at a weighted average exercise price of $0.004, $0.13 and $0.32 per share have not been included in the computation of diluted net loss per share for the period from inception to December 31, 1997 and the years ended December 31, 1998 and 1999, respectively, as their effects would have been anti-dilutive.

(O) DISCLOSURES ABOUT SEGMENTS OF AN ENTERPRISE

SFAS No. 131, DISCLOSURES ABOUT SEGMENTS OF AN ENTERPRISE AND RELATED INFORMATION establishes standards for reporting information regarding operating segments and establishes standards for related disclosures about products and services and geographic areas. Operating segments are identified as components of an enterprise about which separate discrete financial information is available for evaluation by the chief operating decision maker, or decision making group, in making decisions how to allocate resources and assess performance. To date, the Company has viewed its operations and manages its business as principally one operating segment.

(2) INVENTORIES

Inventories as of December 31, 1999 consist of the following, in thousands:

Raw materials and subassemblies	$ 541
Work in progress	855
Finished goods	814
	$2,210

(3) PROPERTY AND EQUIPMENT

Property and equipment as of December 31, 1998 and 1999 consist of the following, in thousands:

	ESTIMATED USEFUL LIFE	1998	1999
Computer equipment and software	2-3 years	$ 1,836	$ 5,956
Furniture and fixtures	3-5 years	88	50
Leasehold improvements	Life of lease	--	69
		1,924	6,075
Less accumulated depreciation and amortization		(418)	(1,806)
		$ 1,506	$ 4,269

(4) LONG-TERM OBLIGATIONS

Sonus has a $7,000,000 equipment line of credit with a bank, bearing interest at the bank's prime rate (8.5% at December 31, 1999) plus 0.5%, available through June 30, 2000. Amounts

(4) LONG-TERM OBLIGATIONS (CONTINUED)
borrowed under the line shall be repaid over a 42- or 48-month period. Under the agreement, all of Sonus' assets, except intellectual property, have been pledged as collateral and Sonus must maintain a certain minimum tangible stockholders' equity and quick ratio, as defined. As of December 31, 1998 and 1999, Sonus had outstanding balances of $1,650,000 and $4,738,000, respectively. As of December 31, 1999, Sonus had additional borrowings available under the equipment line of credit of $1,652,000.

The aggregate principal payments on long-term obligations as of December 31, 1999 are as follows: $1,336,000 in 2000; $1,399,000 in 2001; $1,201,000 in 2002; $763,000 in 2003; and $39,000 in 2004.

Sonus also has $200,000 letter of credit with a bank available through June 30, 2000. As of December 31, 1999, Sonus has committed approximately $166,000 against the letter of credit, representing the security deposit for Sonus' leased property.

(5) ACCRUED EXPENSES

Accrued expenses as of December 31, 1998 and 1999 consist of the following, in thousands:

	1998	1999
Employee compensation and related costs	$195	$1,381
Professional fees	132	609
Facilities	100	137
Other	63	564
	$490	$2,691

(6) INCOME TAXES

Sonus provides for income taxes in accordance with SFAS No. 109, ACCOUNTING FOR INCOME TAXES. Deferred tax assets and liabilities are determined based on differences between the financial statement and tax bases of assets and liabilities using enacted tax rates.

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amount of assets and liabilities for financial reporting purposes and the amounts for income tax purposes. A valuation allowance has been recorded for the net deferred tax asset due to the uncertainty of realizing the benefit of this asset.

(6) INCOME TAXES (CONTINUED)

The following is a summary of the significant components of Sonus' deferred tax assets and liabilities as of December 31, 1998 and 1999, in thousands:

	1998	1999
Net operating loss carryforwards	$2,230	$ 9,204
Tax credit carryforwards	308	761
Start-up costs	625	485
Deferred revenue	--	412
Other temporary differences	44	560
Valuation allowance	(3,207)	(11,422)
	$ --	$ --

As of December 31, 1999, Sonus has net operating loss carryforwards for income tax purposes of approximately $23,000,000, which expire through 2019. Sonus also has available research and development credit carryforwards of approximately $761,000 that expire through 2019. The Internal Revenue Code contains provisions that limit the net operating loss and tax credit carryforwards available to be used in any given year in the event of certain circumstances, including significant changes in ownership interests. Sonus has completed several financings since inception and has incurred ownership changes and may incur an ownership change upon completion of the IPO. Sonus does not believe that these changes will have a material impact on its ability to use its net operating loss and tax credit carryforwards.

(7) LEASE COMMITMENTS

Sonus leases its administrative and development facility under an operating lease, which expires in March 2004. Rent expense was approximately $20,000 from inception to December 31, 1997 and $150,000 and $537,000, for the years ended December 31, 1998 and 1999, respectively. Sonus is responsible for certain real estate taxes, utilities and maintenance costs. The future minimum payments under operating lease payments as of December 31, 1999, are as follows: $709,000 in 2000; $701,000 in 2001; $722,000 in 2002; $743,000 in 2003; and $187,000 in 2004.

(8) REDEEMABLE CONVERTIBLE PREFERRED STOCK

Sonus has authorized 15,000,000 shares of preferred stock, $.01 par value, and designated three series of redeemable convertible preferred stock as of December 31, 1999: 7,220,000 shares of Series A preferred stock; 3,247,857 shares of Series B preferred stock; and 2,153,072 shares of Series C preferred stock. A summary of the redeemable convertible preferred stock issuances as of December 31, 1999 are as follows:

DESCRIPTION	DATE	NUMBER OF SHARES	PRICE PER SHARE	REDEMPTION VALUE
				(IN THOUSANDS)
Series A	November 1997 and July 1998	7,180,000	$ 1.00	$ 7,180
Series B	September and December 1998, May 1999	3,204,287	5.00	16,021
Series C	September, November and December 1999	1,939,681	11.81	22,908
		12,323,968		$46,109

In March 2000, Sonus issued 1,509,154 shares of Series D redeemable convertible preferred stock at $16.40 per share resulting in net proceeds of approximately $24,710,000. (Note 11(a))

The rights, preferences and privileges of the Series A, Series B and Series C redeemable convertible preferred stock are as follows:

REDEMPTION

If requested prior to the redemption dates specified below by holders of 66 2/3% of the then outstanding Series A, B and C preferred stock, Sonus is required to redeem such stock at $1.00, $5.00 and $11.81 per share, respectively, as adjusted in the event of future dilution, plus declared but unpaid dividends as follows:

REDEMPTION DATE	PERCENTAGE OF THEN OUTSTANDING PREFERRED SHARES TO BE REDEEMED
November 18, 2002	33.33%
November 18, 2003	50.00%
November 18, 2004	All shares then held

DIVIDENDS

Series A, B and C preferred stockholders are entitled to receive any cash dividend declared on common stock equal to the amount they would be entitled to if such preferred stock had been converted into common stock. In connection with the sale of an aggregate of 211,688 shares of Series C preferred stock in November and December 1999, Sonus recorded a charge to accumulated deficit of $2.5 million. This amount represents the beneficial conversion feature of the Series C preferred stock. This amount has been accounted for as a dividend to preferred stockholders and as a result, increased Sonus' additional paid in capital, net loss available to common stockholders and the related net loss per share.

LIQUIDATION PREFERENCE

In the event of liquidation of Sonus and before any distribution to common stockholders, the Series A, B and C preferred stockholders are entitled to share pro rata, $1.00, $5.00 and $11.81 per share, respectively, plus all declared but unpaid dividends.

VOTING RIGHTS

Series A, B and C preferred stockholders are entitled to one vote per common share equivalent on all matters voted on by holders of common stock. In addition, the Series A preferred stockholders are entitled to elect 40% of the board members as long as 1,775,000 shares of such preferred stock are outstanding.

CONVERSION

Each share of Series A, B and C preferred stock is convertible into 2.5 shares of common stock, adjustable for certain dilutive events. Conversion is at the option of the holder, but becomes automatic upon the closing of an IPO for the Series A, B and C preferred stock in which at least $10,000,000 of net proceeds shall be received by Sonus at a price of at least $8.00 per share.

(9) STOCKHOLDERS' EQUITY (DEFICIT)

(A) STOCK SUBSCRIPTIONS RECEIVABLE

On November 4, 1998, Sonus entered into a stock subscription agreement for $257,000 from an officer that bears interest at 8%. The note is secured by 2,570,000 shares of Sonus' restricted common stock and is due upon the earlier of November 4, 2003 or 180 days after such shares are eligible for public sale. The interest payments on the note are unconditional and are not limited to the aforementioned stock. As of December 31, 1999, this note due Sonus had a remaining balance of $236,000.

On September 1, 1999, Sonus entered into a stock subscription agreement for $110,250 from an officer that bears interest at 8%. The full recourse note is secured by 562,500 shares of Sonus' restricted common stock and is due upon the earlier of September 1, 2004 or 180 days after such shares are eligible for public sale.

(B) COMMON STOCK PURCHASE RIGHT

In November 1999, Sonus signed a definitive purchase and license agreement (the Agreement) with a customer to provide certain Sonus products. Under the terms of the Agreement, the customer also has the right to purchase shares of common stock in Sonus' IPO at the IPO price. The number of shares subject to this right equals 5% of the dollar value of the customer's accumulated purchases of Sonus' products and services as of the date of the IPO divided by the IPO per share price, but in no event more than 5% of the shares offered in the IPO. The ability of the customer to exercise its right to purchase such shares is contingent upon a closing of an IPO on a national exchange.

(C) RESTRICTED STOCK

Sonus issued 8,205,231 and 87,500 shares of restricted common stock outside of the 1997 Stock Incentive Plan (the Plan) in the period ended December 31, 1997 and in the year ended December 31, 1999, respectively. These shares are subject to repurchase agreements which expire over a five-year period. Sonus may repurchase any remaining restricted shares of common stock held by these individuals upon termination of employment at their original purchase price ranging from $.0004 to $.004 per share. As of December 31, 1999, 3,793,916 shares of this common stock were restricted and subject to Sonus' repurchase.

(D) 1997 STOCK INCENTIVE PLAN

The Plan, which is administered by the Board of Directors, permits Sonus to sell or award restricted common stock or to grant incentive and nonqualified stock options for the purchase of common stock to employees, directors and consultants. At December 31, 1999, of the 16,250,000 shares authorized under the Plan, 1,688,175 shares are available for future sale of restricted common stock or grant of stock options.

Sonus issued shares of restricted common stock to employees and consultants which are subject to repurchase agreements and vest over a four or five-year period. If the employee leaves or if the services are not performed, Sonus may repurchase any restricted shares of common stock held by these individuals at their original purchase prices ranging from $0.02 to $0.66 per share. At December 31, 1999, 10,827,839 shares of the outstanding common stock issued under the Plan were restricted and subject to Sonus' repurchase.

A summary of activity under Sonus' Plan for the period from inception to December 31, 1999, is as follows:

RESTRICTED STOCK AWARDS

	NUMBER OF SHARES	PURCHASE PRICE	WEIGHTED AVERAGE PURCHASE PRICE
Outstanding, August 7, 1997 (inception)	--	$ --	$ --
Issued	1,031,875	.02	.02
Outstanding, December 31, 1997	1,031,875	.02	.02
Issued	7,286,247	.02-.20	.07
Outstanding, December 31, 1998	8,318,122	.02-.20	.06
Issued	4,989,372	.02-.66	.30
Outstanding, December 31, 1999	13,307,494	$ .02-.66	$.15
Unrestricted common stock, December 31, 1999	2,479,655	$ .02-.66	$.06

STOCK OPTION AWARDS

	NUMBER OF SHARES	PURCHASE PRICE	WEIGHTED AVERAGE EXERCISE PRICE
Outstanding, August 7, 1997 (inception)	--	$ --	$ --
Granted	125,000	.004	.004
Outstanding, December 31, 1997	125,000	.004	.004
Granted	445,000	.02-.20	.16
Canceled	(12,500)	.20	.20
Outstanding, December 31, 1998	557,500	.004-.20	.13
Granted	696,831	.20-.66	.39
Exercised	(236,750)	.004-.20	.07
Outstanding, December 31, 1999	1,017,581	$ .02-.66	$ .32
Exercisable, December 31, 1999	124,793	$ .02-.48	$ .17

The following table summarizes information relating to currently outstanding and exercisable options as of December 31, 1999:

	OUTSTANDING			EXERCISABLE	
EXERCISE PRICE	NUMBER OF SHARES	WEIGHTED AVERAGE REMAINING CONTRACTUAL LIFE(YEARS)	WEIGHTED AVERAGE EXERCISE PRICE	NUMBER OF SHARES	WEIGHTED AVERAGE EXERCISE PRICE
$0.02	50,000	9.43	$0.02	25,000	$0.02
0.20	578,250	8.78	0.20	95,293	0.20
0.48	245,750	9.74	0.48	4,500	0.48
0.66	143,581	9.88	0.66	--	--
	1,017,581		$ .32	124,793	$ .17

DEFERRED COMPENSATION

In connection with certain stock option grants and the issuance of restricted common stock during the year ended December 31, 1999, and the issuance of an aggregate of 3,057,330 shares of restricted common stock and options to purchase common stock in the first quarter of 2000 through the date of this filing, Sonus recorded deferred compensation of approximately $20,859,000 and $26,050,000, respectively. This represents the aggregate difference between the exercise price or purchase price and the fair value of the common stock on the date of grant or sale for accounting purposes. The deferred compensation will be recognized as an expense over the vesting period of the underlying stock options and restricted common stock. Sonus recorded compensation expense of $4,255,000 in the year ended December 31, 1999, related to these options and restricted common stock. Sonus expects to record $20,314,000, $11,985,000, $6,661,000, $3,146,000 and $548,000 in compensation expense in the years ended December 31, 2000, 2001, 2002, 2003 and 2004, respectively.

The amortization of deferred compensation in the statement of operations for the year ended December 31, 1999 by expense classification is as follows, in thousands:

Manufacturing	$ 92
Research and development	1,454
Sales and marketing	2,102
General and administrative	607
	$4,255

STOCK-BASED COMPENSATION

Sonus granted 417,500 nonqualified stock options to nonemployees for services rendered in the period from inception to December 31, 1999. In 1998 and 1999, Sonus sold 125,000 shares of restricted common stock and 10,000 shares of Series B preferred stock to consultants at their then current fair market value, subject to repurchase provisions, in the event consulting services are no longer provided.

Sonus has valued the stock options and the issuances of restricted common and Series B preferred stock based upon the fair market value of the services rendered where Sonus believes the value of these services is more readily determinable than the value of the options or restricted stock. All other grants of options and issuances of restricted stock to nonemployees are valued based upon the Black-Scholes option pricing. As of December 31, 1999, 135,000 stock options, 80,000 shares of restricted common stock, and 6,000 shares of Series B preferred stock are restricted. In accordance with Emerging Issues Task Force 96-18, Sonus will record the value of these services as earned.

The value of the options granted to employees as calculated under SFAS No. 123 for the period from inception to December 31, 1997 and during the year ended December 31, 1998 was immaterial to the financial statements. Sonus has computed the pro forma disclosures required under SFAS No. 123 for options granted to employees for the year ended December 31, 1999, using the Black-Scholes option pricing model with an assumed risk-free interest rate of 5%, 60% volatility and an expected life ranging from 2-5 years with the assumption that no dividends will be paid. Had compensation expense for Sonus' stock option plan been determined consistent with SFAS No. 123 for the year ended December 31, 1999, the pro forma net loss and pro forma net loss per share would have been as follows, in thousands, except per share data:

Net loss--	
As reported	$(26,387)
Pro forma	(26,400)
Basic and diluted net loss per share--	
As reported	$ 5.53
Pro forma	5.53

(E) COMMON STOCK RESERVED

Common stock reserved for future issuance at December 31, 1999 consisted of the following:

Conversion of:	
Series A preferred stock	17,950,000
Series B preferred stock	8,010,718
Series C preferred stock	4,849,202
Total preferred stock	30,809,920
Stock incentive plan	2,705,753
	33,515,673

(10) EMPLOYEE BENEFIT PLAN

In 1998, Sonus adopted a savings plan for its employees, which has been qualified under Section 401(k) of the Internal Revenue Code. Eligible employees are permitted to contribute to the 401(k) plan through payroll deductions within statutory and plan limits. Contributions from Sonus are made at the discretion of the Board of Directors. Sonus has made no contributions to the 401(k) plan to date.

(11) SUBSEQUENT EVENTS

(A) SALE OF SERIES D REDEEMABLE CONVERTIBLE PREFERRED STOCK

In March 2000, Sonus issued 1,509,154 shares of Series D redeemable convertible preferred stock at $16.40 per share resulting in net proceeds of $24,710,000. Each share of Series D redeemable convertible preferred stock is convertible into 1.0 share of common stock, adjustable for certain dilutive events.

(B) PROPOSED INITIAL PUBLIC OFFERING

In March 2000, Sonus filed for an IPO of its common stock with the SEC. If the offering is consummated as presently anticipated all of the outstanding redeemable convertible preferred stock will automatically convert into 32,319,074 shares of common stock.

(C) INCREASE IN AUTHORIZED CAPITAL STOCK

In March 2000, the Board of Directors authorized, subject to stockholder approval, an increase in the authorized shares of Sonus' common stock from 70,000,000 to 300,000,000 shares and authorized and approved 5,000,000 shares of $.01 par value undesignated preferred stock that may be issued by the Board of Directors from time to time in one or more series. This amendment is to be effective upon the closing of Sonus' IPO.

(D) AMENDMENT TO THE 1997 STOCK INCENTIVE PLAN

In March 2000, the Board of Directors approved, subject to stockholder approval, an amendment to the Plan to increase the amount of shares available under the plan to 27,000,000. On January 1 of each year, commencing with January 2001 the aggregate number of shares of

common stock available for purchase under the Plan shall increase by the lesser of (i) 5% of the outstanding shares on December 31 of the preceding year or (ii) an amount determined by the Board of Directors.

(E) 2000 EMPLOYEE STOCK PURCHASE PLAN

In March 2000, the Board of Directors approved, subject to stockholder approval, the Employee Stock Purchase Plan. A total of 1,200,000 shares of common stock have been reserved for issuance under this plan. Eligible employees may purchase common stock at a price equal to 85% of the lower of the fair market value of the common stock at the beginning or end of each offering period. Participation is limited to 20% of an employee's eligible compensation not to exceed amounts allowed by the Internal Revenue Code. On January 1 of each year, commencing with January 2001, the aggregate number of shares of common stock available for purchase under the Employee Stock Purchase Plan shall increase by the lesser of (i) 2% of the outstanding shares on December 31 of the preceding year or (ii) an amount determined by the Board of Directors.

No dealer, salesperson, or other person is authorized to give any information or to represent anything not contained in this prospectus. You must not rely on any unauthorized information or representations. This prospectus is an offer to sell only the shares offered hereby, but only under circumstances and in jurisdictions where it is lawful to do so. The information contained in this prospectus is current only as of its date.

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Through and including , 2000 (the 25th day after the date of this prospectus), all dealers effecting transactions in these securities, whether or not participating in this offering, may be required to deliver a prospectus. This is in addition to a dealer's obligation to deliver a prospectus when acting as an underwriter and with respect to an unsold allotment or subscription.

SHARES

SONUS NETWORKS, INC.

COMMON STOCK

[LOGO]

GOLDMAN, SACHS & CO.
DAIN RAUSCHER WESSELS
J.P. MORGAN & CO.
ROBERTSON STEPHENS

Representatives of the Underwriters

PART II
INFORMATION NOT REQUIRED IN PROSPECTUS

ITEM 13. OTHER EXPENSES OF ISSUANCE AND DISTRIBUTION

Expenses of the Registrant in connection with the issuance and distribution of the securities being registered, other than the underwriting discounts, are estimated as follows:

	TOTAL
SEC Registration Fee	$ 30,360
NASD Fees	12,000
NASDAQ Listing Fees	*
Printing and Engraving Expenses	*
Legal Fees and Expenses	*
Accountants' Fees and Expenses	*
Blue Sky Fees and Expenses (including legal fees)	15,000
Transfer Agent and Registrar's Fees	*
Miscellaneous Costs	*
Total	$ *

- ------------------------

* To be provided by amendment.

ITEM 14. INDEMNIFICATION OF DIRECTORS, OFFICERS AND EMPLOYEES

Section 145 of the Delaware General Corporation law empowers a Delaware corporation to indemnify its officers and directors and certain other persons to the extent under the circumstances set forth therein.

The form of the Fourth Amended and Restated Certificate of Incorporation of the Registrant and the Amended and Restated By-laws of the Registrant, copies of the forms of which are filed as Exhibits 3.1 and 3.2, provide for indemnification of officers and directors of the Registrant and certain other persons against liabilities and expenses incurred by any of them in certain stated proceedings and under certain stated conditions.

The above discussion of the Registrant's Fourth Amended and Restated Certificate of Incorporation, Amended and Restated By-Laws and Section 145 of the Delaware General Corporation Law is not intended to be exhaustive and is qualified in its entirety by the forms of such Fourth Amended and Restated Certificate of Incorporation, Amended and Restated By-Laws and statute.

The Registrant will agree to indemnify the Underwriters and their controlling persons, and the Underwriters will agree to indemnify the Registrant and its controlling persons, including directors and executive officers of the Registrant, against certain liabilities, including liabilities under the Securities Act. Reference is made to the form of the Underwriting Agreement that will be filed as part of the Exhibits hereto.

In addition, the Registrant intends to purchase a directors and officers liability insurance policy.

ITEM 15. RECENT SALES OF UNREGISTERED SECURITIES

On November 18, 1997, the Registrant issued and sold 7,100,000 shares of Series A Convertible Preferred Stock to 18 investors for an aggregate purchase price of $7,100,000. On July 7, 1998, the Registrant issued and sold 80,000 shares of Series A Convertible Preferred Stock

to two investors for an aggregate purchase price of $80,000. Upon completion of this offering, the Series A Convertible Preferred Stock will convert into 17,950,000 shares of common stock, $0.001 par value (the "Common Stock"), which reflects a 1.5-for-1 split of the Common Stock in October 1999, and a 5-for-3 split of the Common Stock in December 1999. These sales were made in reliance upon Rule 506 of Regulation D, promulgated under the Securities Act and Section 4(2) of the Securities Act, as transactions to accredited investors by an issuer not involving a public offering.

On September 23, 1998, the Registrant issued and sold an aggregate of 3,144,287 shares of Series B Convertible Preferred Stock to a total of 20 investors for an aggregate purchase price of $15,721,435. On December 10, 1998, the Registrant issued and sold an aggregate of 10,000 shares of Series B Convertible Preferred Stock to one investor for a purchase price of $50,000. On May 24, 1999, the Registrant issued and sold 50,000 shares of Series B Convertible Preferred Stock to one investor for a purchase price of $250,000. Upon completion of this offering, the Series B Convertible Preferred Stock will convert into 8,010,718 shares of Common Stock, which reflects a 1.5-for-1 split of the Common Stock in October 1999, and a 5-for-3 split of the Common Stock in December 1999. These sales were made in reliance upon Rule 506 of Regulation D, promulgated under the Securities Act and Section 4(2) of the Securities Act, as transactions to accredited investors by an issuer not involving a public offering.

On September 10, 1999, the Registrant issued and sold 1,727,993 shares of Series C Convertible Preferred Stock to a total of 49 investors for an aggregate purchase price of $20,407,597. On November 15, 1999, November 30, 1999 and December 9, 1999, the Registrant issued and sold an aggregate of 211,688 shares of Series C Convertible Preferred Stock to a total of three investors for an aggregate purchase price of $2,500,035. Upon completion of this offering, the Series C Convertible Preferred Stock will convert into 4,849,202 shares of Common Stock, which reflects a 1.5-for-1 split of the Common Stock in October 1999, and a 5-for-3 split of the Common Stock in December 1999. These transactions were made in reliance upon Rule 506 of Regulation D, promulgated under the Securities Act and Section 4(2) of the Securities Act, as transactions to accredited investors by an issuer not involving a public offering.

On March 9, 2000, the Registrant issued and sold 1,509,154 shares of Series D Convertible Preferred Stock to a total of 20 investors for an aggregate purchase price of $24,750,126. Upon completion of this offering the Series D Convertible Preferred Stock will convert into 1,509,154 shares of Common Stock.

As of February 29, 2000, the Registrant has issued options to certain employees, officers and consultants of the Registrant, to purchase an aggregate of 1,945,929 shares of Common Stock under the Registrant's Amended and Restated 1997 Stock Incentive Plan. The purchase price under the options ranges from $0.004 to $2.00 based on the fair market value of the stock on the date of grant. As of February 29, 2000, the Registrant has issued grants of restricted stock to certain employees, officers and consultants of the Registrant, and as of February 29, 2000 there were 13,786,993 shares of restricted stock outstanding under the Registrant's Amended and Restated 1997 Stock Incentive Plan. The purchase price of the restricted stock ranged from $0.02 to $2.00 based on the fair market value of the stock on the date of issuance. These grants of options, and sales of restricted stock were made in reliance upon Rule 701 promulgated under the Securities Act and are deemed to be exempt transactions as sales of an issuer's securities pursuant to a written plan or contract relating to the compensation of such individuals and upon Section 4(2) of the Securities Act as transactions not involving any public offering.

ITEM 16. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a) Exhibits

The following is a list of exhibits filed as a part of this registration statement:

EXHIBIT NUMBER	DESCRIPTION
1.1*	Form of Underwriting Agreement.
3.1*	Form of Fourth Amended and Restated Certificate of Incorporation of the Registrant.
3.2*	Form of Amended and Restated By-Laws of the Registrant.
4.1*	Specimen Certificate for shares of the Registrant's common stock.
5.1*	Opinion of Bingham Dana LLP, counsel to the Registrant, regarding the legality of the shares of common stock registered hereunder.
10.1	Lease, dated January 21, 1999, as amended, between the Registrant and Glenborough Fund V, Limited Partnership with respect to property located at 5 Carlisle Road, Westford, Massachusetts.
10.2*	Amended and Restated 1997 Stock Incentive Plan of the Registrant.
10.3*	2000 Employee Stock Purchase Plan.
10.4	Series A Preferred Stock Purchase Agreement, dated as of November 18, 1997, by and among the Registrant and the "Purchaser" parties thereto.
10.5	Series B Preferred Stock Purchase Agreement, dated as of September 23, 1998, by and among the Registrant and the "Purchaser" parties thereto.
10.6	Series C Preferred Stock Purchase Agreement, dated as of September 10, 1999, by and among the Registrant and the "Purchaser" parties thereto.
10.7	Series D Preferred Stock Purchase Agreement, dated as of March 9, 2000, by and among the Registrant and the "Purchaser" parties thereto.
10.8	Third Amended and Restated Investor Rights Agreement, dated as of March 9, 2000 by and among the Registrant and the "Purchaser" parties thereto.
10.9	Third Amended and Restated Right of First Refusal and Co-Sale Agreement, dated as of March 9, 2000, among the Registrant and the persons and entities listed on the signature pages thereto.
10.10	Loan and Security Agreement, dated as of March 6, 1998, by and between the Registrant and Silicon Valley Bank.
10.11	Modification Agreement, dated as of November 31, 1998, by and between the Registrant and Silicon Valley Bank.
10.12	Modification Agreement, dated as of November 29, 1999, by and between the Registrant and Silicon Valley Bank.
23.1	Consent of Arthur Andersen LLP.
23.2*	Consent of Bingham Dana LLP, counsel to the Registrant (included in Exhibit 5.1).
24.1	Power of Attorney (included in signature page to Registration Statement).
27.1	Financial Data Schedule.

* To be filed by amendment.

All schedules have been omitted because either they are not required, are not applicable or the information is otherwise set forth in the Financial Statements and notes thereto.

ITEM 17. UNDERTAKINGS

Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the Registrant pursuant to the provisions described in Item 14 hereof, or otherwise, the Registrant has been advised that in the opinion of the

Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

The undersigned Registrant hereby undertakes:

(1) To provide the Underwriters at the closing specified in the Underwriting Agreement certificates in such denominations and registered in such names as required by the Underwriters to permit prompt delivery to each purchaser.

(2) That for purposes of determining any liability under the Securities Act of 1933, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the Registrant pursuant to Rule 424(b)(1) or (4), or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.

(3) That for the purpose of determining any liability under the Securities Act of 1933, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and this offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-1 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the Town of Westford, Commonwealth of Massachusetts, on this 10th day of March, 2000.

SONUS NETWORKS, INC.

BY: /S/ HASSAN M. AHMED

Hassan M. Ahmed
PRESIDENT AND CHIEF EXECUTIVE OFFICER

POWER OF ATTORNEY

Each person whose signature appears below hereby appoints Rubin Gruber, Hassan M. Ahmed and Stephen J. Nill, and each of them severally, acting alone and without the other, his/her true and lawful attorney-in-fact with full power of substitution or resubstitution, for such person and in such person's name, place and stead, in any and all capacities, to sign on such person's behalf, individually and in each capacity stated below, any and all amendments, including post-effective amendments to this Registration Statement, and to sign any and all additional registration statements relating to the same offering of securities of the Registration Statement that are filed pursuant to Rule 462(b) of the Securities Act of 1933, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact, full power and authority to do and perform each and every act and thing requisite or necessary to be done in and about the premises, as fully to all intents and purposes as such person might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact, or their substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed below by the following persons in the capacities and on the dates indicated:

SIGNATURE	TITLE	DATE
/s/ HASSAN M. AHMED Hassan M. Ahmed	President, Chief Executive Officer and Director (Principal Executive Officer)	March 10, 2000
/s/ STEPHEN J. NILL Stephen J. Nill	Vice President of Finance and Administration and Chief Financial Officer (Principal Financial and Accounting Officer)	March 10, 2000
/s/ RUBIN GRUBER Rubin Gruber	Chairman of the Board of Directors and Director	March 10, 2000
/s/ EDWARD T. ANDERSON Edward T. Anderson	Director	March 10, 2000
/s/ PAUL J. FERRI Paul J. Ferri	Director	March 10, 2000
/s/ PAUL J. SEVERINO Paul J. Severino	Director	March 10, 2000

EXHIBIT INDEX

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* To be filed by amendment.

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LEASE

This lease (the Lease) between Glenborough Fund V, Limited Partnership, a Delaware limited partnership (herein Landlord), and Sonus Networks, Inc., a Delaware Corporation (herein Tenant), is dated for reference purposes only as of this 21st day of January, 1999.

1. LEASE OF PREMISES.

In consideration of the Rent (as defined in Section 6.) and the provisions of this Lease, Landlord leases to Tenant and Tenant leases from Landlord the Premises shown by diagonal lines on the floor plan attached hereto as Exhibit "A", and further described in Section 2.13. The Premises are located within the Building and Project (as described in Sections 2.13. and 2.14.). Tenant shall have the nonexclusive right (unless otherwise provided herein) in common with Landlord, other tenants, subtenants and invitees, to use the Common Area (as defined in Section 2.5.).

2. DEFINITIONS.

As used in this Lease the following terms shall have the following meanings:

2.2. ANNUAL BASE RENT:

$664,640.00 beginning April 1, 1999 ending March 31, 2000
$685,410.00 beginning April 1, 2000 ending March 31, 2001
$706,180.00 beginning April 1, 2001 ending March 31, 2002
$726,950.00 beginning April 1, 2002 ending March 31, 2003
$747,720.00 beginning April 1, 2003 ending March 31, 2004

2.3. BASE YEAR (Section 6.3.): operating expenses calendar year 1999
Real Estate taxes fiscal year 1999.

2.4. COMMENCEMENT DATE: April 1, 1999. If the Commencement Date is other than the first day of a month, then the Expiration Date of the Lease shall be extended to the last day of the month in which the Lease expires.

2.5. COMMON AREA: The building lobbies, common corridors and hallways, rest rooms, parking areas and other generally understood public or common areas.

2.6. EXPIRATION DATE: March 31, 2004, unless otherwise sooner terminated in accordance with the provisions of this Lease.

2.8. LANDLORD'S ADDRESS FOR NOTICE:

Glenborough Properties, L.P.
c/o Glenborough Realty Trust Incorporated
400 South El Camino Real, Suite 1100
San Mateo, CA 94402-1708
Attn: Legal Department

RENT PAYMENT ADDRESS:

Glenborough Fund V, L.P. c/o
Glenborough Realty Trust, Inc.
300 Nickerson Road
Marlborough, MA 01752

TENANT'S MAILING ADDRESS:

Sonus Networks, Inc.
5 Carlisle Road
Westford, MA 01886

2.9. LISTING AND LEASING AGENT(S): Boston Real Estate Partners

2.10. MONTHLY INSTALLMENTS OF BASE RENT:

$55,386.67	beginning	April 1, 1999	ending	March 31, 2000
$57,117.50	beginning	April 1, 2000	ending	March 31, 2001
$58,848.33	beginning	April 1, 2001	ending	March 31, 2002
$60,579.17	beginning	April 1, 2002	ending	March 31, 2003
$62,310.00	beginning	April 1, 2003	ending	March 31, 2004

2.11. NOTICE: Except as otherwise provided herein, Notice shall mean any notices, approvals and demands permitted or required to be given under this Lease. Notice shall be given in the form and manner set forth in Section 23.

2.12. PARKING: Tenant shall be entitled to the nonexclusive use of 125 parking spaces. The charge for parking shall be 0 per month per parking space. Landlord may permit Tenant to rent additional spaces, if available, at the then current parking rate. Each such additional parking space, however, shall not be a part of this Lease, and Landlord reserves the right to adjust the parking rate for each additional parking space at any time and to terminate the rental of such additional parking spaces at any time.

2.13. PREMISES: That portion of the 2nd floor(s) of the Building located at 5 Carlisle Road, Westford, MA, commonly referred to as Suite(s) 2E-01 & 2W-01, as shown by diagonal lines on Exhibit "A". For purposes of this Lease, the Premises is deemed to contain approximately 41,540.00 square feet of Rentable Area.

2.14. PROJECT: The building of which the Premises are a part (the Building) and any other buildings or improvements on the real property (the Property) located at 5 Carlisle Road, Westford, MA 01886 and further described in Exhibit "B". The Project is commonly known as Phase 1, Westford Corporate Center.

2.15. RENTABLE AREA: As to both the Premises and the Project, the respective measurements of floor area as may from time to time be subject to lease by Tenant and all tenants of the Project, respectively, as determined by Landlord and applied on a consistent basis throughout the Project.

2.16. SECURITY DEPOSIT (Section 8.): $166,160.01.

2.17. STATE: The Commonwealth of Massachusetts.

2.19. TENANT'S PROPORTIONATE SHARE: 50.89%. Such share is a fraction, the numerator of which is the Rentable Area of the Premises, and the denominator of which is the Rentable Area of the Project, as determined by Landlord from time to time. The Project consists of 1 Building(s), and, for purposes of this Lease, the Building(s) are deemed to contain approximately 81,615 square feet of Rentable Area.

2.20. TENANT'S USE (Section 9.): General Office and Light Manufacturing, final test, assembly and distribution of Telecommunications Equipment.

2.21. TERM: The period commencing on the Commencement Date and expiring at midnight on the Expiration Date.

3. EXHIBITS AND ADDENDA.

The exhibits and addenda listed below (unless lined out) are attached hereto and incorporated by reference in this Lease:

3.1. Exhibit A - Floor Plan showing the Premises.
3.2. Exhibit B - Site Plan of the Project.
3.3. Exhibit C - Building Standard Tenant Improvements.
3.4. Exhibit D - Work Letter and Drawings.
3.5. Exhibit E - Rules and Regulations.
3.6. Addenda: Attached hereto and made a part of this Lease by reference are Sections 37-42.

4. DELIVERY OF POSSESSION.

If for any reason Landlord does not deliver possession of the Premises to Tenant on the Commencement Date, and such failure is not caused by an act or omission of Tenant, the Expiration Date shall be extended by the number of days the Commencement Date has been delayed and the validity of this Lease shall not be impaired nor shall Landlord be subject to any liability for such failure; but Rent shall be abated until delivery of possession. Provided, however, if the Commencement Date has been delayed by an act or omission of Tenant then Rent shall not be abated until delivery of possession and the Expiration Date shall not be extended. Delivery of possession shall be deemed to occur on the earlier of the date Landlord receives a Certificate of Occupancy or upon substantial completion of the Premises (as certified by Landlord's architect). If Landlord permits Tenant to enter into possession of the Premises before the Commencement Date, such possession shall be subject to the provisions of this Lease, including, without limitation, the payment of Rent (unless otherwise agreed in writing).

Within ten (10) days of delivery of possession Landlord shall deliver to Tenant and Tenant shall execute an Acceptance of Premises in which Tenant shall certify, among other things, that (a) Landlord has satisfactorily completed Landlord's Work to the Premises pursuant to Exhibit "D", unless written exception is set forth thereon, and (b) that Tenant accepts the Premises. Tenant's failure to execute and deliver the Acceptance of Premises shall be conclusive evidence, as against Tenant, that Landlord has satisfactorily completed Landlord's Work to the Premises pursuant to Exhibit "D".

In the event Tenant fails to take possession of the Premises following execution of this Lease, Tenant shall reimburse Landlord promptly upon demand for all costs incurred by Landlord in connection with entering into this Lease including, but not limited to, broker fees and commissions, sums paid for the preparation of a floor and/or space plan for the Premises, costs incurred in performing Landlord's Work pursuant to Exhibit "D", loss of rental income, attorneys' fees and costs, and any other damages for breach of this Lease established by Landlord.

5. INTENDED USE OF THE PREMISES.

The statement in this Lease of the nature of the business to be conducted by Tenant in the Premises does not constitute a representation or guaranty by Landlord as to the present or future suitability of the Premises for the conduct of such business in the Premises, or that it is lawful or permissible under the certificate of occupancy issued for the Building, or is otherwise permitted by law. Tenant's taking possession of the Premises shall be conclusive evidence, as against Tenant, that, at the time such possession was taken, the Premises were satisfactory for Tenant's intended use.

6. RENT.

6.1. Payment of Rent. Tenant shall pay Rent for the Premises. Monthly Installments of Rent shall be payable in advance on the first day of each calendar month of the Term. If the Term begins (or ends) on other than the first (or last) day of a calendar month, Rent for the partial month shall be prorated based on the number of days in that month. Rent shall be paid to Landlord at the Rent Payment Address set forth in Section 2.8., or to such other person at such place as Landlord may from time to time designate in writing, without any prior demand therefor and without deduction or offset, in lawful money of the United States of America. Tenant shall pay Landlord the first Monthly Installment of Base Rent upon execution of this Lease.

6.3. Additional Rent for Increases in Tax Costs and Operating Expenses. If, in any calendar year during the Term of this Lease, Landlord's Tax Costs and Operating Expenses (as hereinafter defined) for the Project (hereinafter sometimes together referred to as Direct Costs) shall be higher than in the Base Year specified in Section 2.3., Additional Rent for such Direct Costs payable hereunder shall be increased by an amount equal to Tenant's Proportionate Share of the difference between Landlord's actual Direct Costs for such calendar year and the actual Direct Costs of the Base Year. However, if during any calendar year of the Term the occupancy of the Project is less than ninety-five percent (95%), then Landlord shall make an appropriate adjustment of the variable components of Operating Expenses, as reasonably determined by Landlord, to determine the amount of Operating Expenses that would have been incurred had the Project been ninety-five percent (95%) occupied during that calendar year. This estimated amount shall be deemed the amount of Operating Expenses for that calendar year. For purposes hereof, "variable components" shall include only those Operating Expenses that are affected by variations in occupancy levels.

6.3.1. Definitions. As used in this Section 6.3., the following terms shall have the following meanings:

6.3.1.1. Tax Costs shall mean any and all real estate taxes, other similar charges on real property or improvements, assessments, and all other charges (but in no event Landlord's income or estate taxes) assessed, levied, imposed or becoming a lien upon part or all of the Project or the appurtenances thereto, or attributable thereto, or on the rents, issues, profits or income received or derived therefrom which may be imposed, levied, assessed or charged by the United States or the state, county or city in which the Project is located, or any other local government authority or agency or political subdivision thereof. Tax Costs for each tax year shall be apportioned to determine the Tax Costs for the subject calendar years.

Landlord, at Landlord's reasonable discretion, may contest any taxes levied or assessed against the Building or Project during the Term. If Landlord contests any taxes levied or assessed during the Term, Tenant shall pay Landlord Tenant's Proportionate Share of all reasonable costs incurred by Landlord in connection with the contest.

6.3.1.2. Operating Expenses shall mean any and all expenses incurred by Landlord in connection with the management, maintenance, operation, and repair of the Project, the equipment, adjacent walks, Common Area, parking areas, the roof, landscaped areas, including, but not limited to, salaries, wages, benefits, pension payments, payroll taxes, worker's compensation, and other costs related to employees engaged in the management, operation, maintenance and/or repair of the Project; any and all assessments or costs incurred with respect to Covenants, Conditions and/or Restrictions, Reciprocal Easement Agreements or similar documents affecting the Building or Project, if any; the cost of all charges to Landlord for electricity, natural gas, air conditioning, steam, water, and sewer, and other utilities furnished to the Project including any taxes thereon; reasonable attorneys' fees and/or consultant fees incurred by Landlord in contracting with a company or companies to provide electricity (or any other utility) to the Project, any fees for the installation, maintenance, repair or removal of related equipment, and any exit fees or stranded cost charges mandated by the State; the cost and expense for third-party consultants, accountants and attorneys; a management fee; energy studies and the amortized cost of any energy or other cost saving equipment used by Landlord to provide services pursuant to the terms of the Lease (including the amortized cost to upgrade the efficiency or capacity of Building telecommunication lines and systems if responsibility therefor is assumed by Landlord as discussed in Section 35. hereof); the cost of license fees related to the Project; the cost of all charges for property (all risk), liability, rent loss and all other insurance for the Project to the extent that such insurance is required to be carried by Landlord under any lease, mortgage or deed of trust covering the whole or a substantial part of the Project or the Building, or, if not required under any such lease, mortgage or deed of trust, then to the extent such insurance is carried by owners of properties comparable to the Project; the cost of all building and cleaning supplies and materials; the cost of all charges for security services, cleaning, maintenance and service contracts and other services with independent contractors, including but not limited to the maintenance, operation and repair of all electrical, plumbing and mechanical systems of the Project and maintenance, repair and replacement of any intrabuilding cabling

network (ICN), if any; and the cost of any janitorial, utility or other services to be provided by Landlord.

Notwithstanding the foregoing, the following shall not be included within Operating Expenses: (i) costs of capital improvements (except any improvements that might be deemed "capital improvements" related to the enhancement or upgrade of the ICN and related equipment) and costs of curing design or construction defects; (ii) depreciation; (iii) interest and principal payments on mortgages and other debt costs and ground lease payments, if any, and any penalties assessed as a result of Landlord's late payments of such amounts; (iv) real estate broker leasing commissions or compensation; (v) any cost or expenditure (or portion thereof) for which Landlord is reimbursed, whether by insurance proceeds or otherwise; (vi) attorneys' fees, costs, disbursements, advertising and marketing and other expenses incurred in connection with the negotiation of leases with prospective tenants of the Building; (vii) rent for space which is not actually used by Landlord in connection with the management and operation of the Building; (viii) all costs or expenses (including fines, penalties and legal fees) incurred due to the violation by Landlord, its employees, agents, contractors or assigns of the terms and conditions of the Lease, or any valid, applicable building code, governmental rule, regulation or law; (ix) except for the referenced management compensation, any overhead or profit increments to any subsidiary or affiliate of Landlord for services on or to the Building, to the extent that the costs of such services exceed competitive costs for such services; (x) the cost of constructing tenant improvements for Tenant or any other tenant of the Building or Project; (xi) Operating Expenses specially charged to and paid by any other tenant of the Building or Project; and (xii) the cost of special services, goods or materials provided to any other tenant of the Building or Project.

6.3.2. Determination and Payment of Tax Costs and Operating Expenses.

6.3.2.1. On or before the last day of each December during the Term of this Lease, Landlord shall furnish to Tenant a written statement showing in reasonable detail Landlord's projected Direct Costs for the succeeding calendar year. If such statement of projected Direct Costs indicates the Direct Costs will be higher than in the Base Year, then the Rent due from Tenant hereunder for the next succeeding year shall be increased by an amount equal to Tenant's Proportionate Share of the difference between the projected Direct Costs for the calendar year and the Base Year. If during the course of the calendar year Landlord determines that actual Direct Costs will vary from its estimate by more than five percent (5%), Landlord may deliver to Tenant a written statement showing Landlord's revised estimate of Direct Costs. On the next payment date for Monthly Installments of Rent following Tenant's receipt of either such statement, Tenant shall pay to Landlord an additional amount equal to such monthly Rent increase adjustment or a reduced amount if Landlord estimates of direct costs is lower (as set forth on Landlord's statement). Thereafter, the monthly Rent adjustment payments becoming due shall be in the amount set forth in such projected Rent adjustment statement from Landlord. Neither Landlord's failure to deliver nor late delivery of such statement shall constitute a default by Landlord or a waiver of Landlord's right to any Rent adjustment provided for herein.

6.3.2.2. On or before the first day of each April during the Term of this Lease, Landlord shall furnish to Tenant a written statement of reconciliation (the Reconciliation) showing in reasonable detail Landlord's actual Direct Costs for the prior year, together with a full statement of any adjustments necessary to reconcile any sums paid as estimated Rent adjustments during the prior year with those sums actually payable for such prior year. In the event such Reconciliation shows that additional sums are due from Tenant, Tenant shall pay such sums to Landlord within ten (10) days of receipt of such Reconciliation. In the event such Reconciliation shows that a credit is due Tenant, such credit shall be credited against the sums next becoming due from Tenant, unless this Lease has expired or been terminated pursuant to the terms hereof (and all sums due Landlord have been paid), in which event such sums shall be refunded to Tenant. Neither Landlord's failure to deliver nor late delivery of such Reconciliation to Tenant by April first shall constitute a default by Landlord or operate as a waiver of Landlord's right to collect all Rent due hereunder.

6.3.2.3. So long as Tenant is not in default under the terms of the Lease and provided Notice of Tenant's request is given to Landlord within thirty (30) days after Tenant's receipt of the Reconciliation, Tenant may inspect Landlord's Reconciliation accounting records relating to Direct Costs at Landlord's corporate office, during normal business hours, for the purpose of verifying the charges contained in such statement. The audit must be completed within sixty (60) days of Landlord's receipt of Tenant's Notice, unless such period is extended by Landlord (in Landlord's reasonable

discretion). Before conducting any audit however, Tenant must pay in full the amount of Direct Costs billed.

Tenant may only review those records that specifically relate to Direct Costs. Tenant may not review any other leases or Landlord's tax returns or financial statements. In conducting an audit, Tenant must utilize an independent certified public accountant experienced in auditing records related to property operations. The proposed accountant is subject to Landlord's reasonable prior approval. The audit shall be conducted in accordance with generally accepted rules of auditing practices. Tenant may not conduct an audit more often than once each calendar year. Tenant may audit records relating to a calendar year only one time. No audit shall cover a period of time other than the calendar year from which Landlord's Reconciliation was generated. Upon receipt thereof, Tenant shall deliver to Landlord a copy of the audit report and all accompanying data. Tenant and Tenant's auditor shall keep confidential any agreements involving the rights provided in this section and the results of any audit conducted hereunder. As a condition precedent to Tenant's right to conduct an audit, Tenant's auditor shall sign a confidentiality agreement in a form reasonably acceptable to Landlord. However, Tenant shall be permitted to furnish information to its attorneys, accountants and auditors to the extent necessary to perform their respective services for Tenant. Notwithstanding anything herein to the contrary, if the results of Tenant's audit show that Tenant was overcharged, then, there shall be a credit for such amounts against the next installments of Operating Expenses due from Tenant. Also, if the overcharge is greater than 5% of total Operating Expenses then, Landlord shall pay Tenant reasonable costs of such audit, excluding travel expenses.

6.4. Definition of Rent. All costs and expenses which Tenant assumes or agrees or is obligated to pay to Landlord under this Lease shall be deemed Additional Rent (which, together with the Base Rent is sometimes referred to as Rent).

6.5. Taxes on Tenant's Use and Occupancy. In addition to Rent and other charges to be paid by Tenant hereunder, Tenant shall pay Landlord upon demand any and all taxes payable by Landlord (other than net income taxes) which are not otherwise reimbursable under this Lease, whether or not now customary or within the contemplation of the parties, where such taxes are upon, measured by or reasonably attributable to (a) the cost or value of Tenant's equipment, furniture, fixtures and other personal property located in the Premises, or the cost or value of any leasehold improvements made in or to the Premises by or for Tenant, other than Building Standard Tenant Improvements made by Landlord, regardless of whether title to such improvements is held by Tenant or Landlord; (b) the gross or net Rent payable under this Lease, including, without limitation, any rental or gross receipts tax levied by any taxing authority with respect to the receipt of Rent hereunder; (c) the possession, leasing, operation, management, maintenance, alteration, repair, use or occupancy by Tenant of the Premises or any portion thereof; or (d) this transaction or any document to which Tenant is a party creating or transferring an interest or an estate in the Premises. If it becomes unlawful for Tenant to reimburse Landlord for any costs as required under this Lease, Base Rent shall be revised to net Landlord the same net Rent after imposition of any tax or other charge upon Landlord as would have been payable to Landlord but for the reimbursement being unlawful.

7. LATE CHARGES.

If Tenant fails to pay when due any Rent or other amounts or charges which Tenant is obligated to pay under the terms of this Lease, then Tenant shall pay Landlord a late charge equal to ten percent (10%) of each such installment if any such installment is not received by Landlord within five (5) days from the date it is due. Tenant acknowledges that the late payment of any Rent will cause Landlord to lose the use of that money and incur costs and expenses not contemplated under this Lease including, without limitation, administrative costs and processing and accounting expenses, the exact amount of which is extremely difficult to ascertain. Landlord and Tenant agree that this late charge represents a reasonable estimate of such costs and expenses and is fair compensation to Landlord for the loss suffered from such nonpayment by Tenant. However, the late charge is not intended to cover Landlord's attorneys' fees and costs relating to delinquent Rent. Acceptance of any late charge shall not constitute a waiver of Tenant's default with respect to such nonpayment by Tenant nor prevent Landlord from exercising any other rights or remedies available to Landlord under this Lease. Late charges are deemed Additional Rent.

In no event shall this provision for the imposition of a late charge be deemed to grant to Tenant a grace period or an extension of time within which to pay any Rent due hereunder or prevent Landlord from exercising any right or remedy available to Landlord upon Tenant's failure to pay such Rent when due.

8. SECURITY DEPOSIT.

Upon execution of this Lease, Tenant agrees to deposit with Landlord a Security Deposit in the amount set forth in Section 2.16. as security for Tenant's performance of its obligations under this Lease. Landlord and Tenant agree that the Security Deposit may be commingled with funds of Landlord and Landlord shall have no obligation or liability for payment of interest on such deposit. Tenant shall not mortgage, assign, transfer or encumber the Security Deposit without the prior written consent of Landlord and any attempt by Tenant to do so shall

be void, without force or effect and shall not be binding upon Landlord.

Notwithstanding anything herein to the contrary, in the event that Tenant has not been in default under the Lease at such time, Landlord will refund one-third 1/3 of Tenant's Security Deposit ($55,386.67) after the twelth (12th) full month of the Lease Term. Further, if Tenant has still not been in default at such time, then Landlord will refund another one-third (1/3) of Tenant's Security Deposit ($55,386.67) after the twenty fourth (24th) month of the Lease Term.

If Tenant fails to timely pay any Rent or other amount due under this Lease, or fails to perform any of the terms hereof after the expiration of notice and grace period per paragraph 19, Landlord may, at its option and without prejudice to any other remedy which Landlord may have, appropriate and apply or use all or any portion of the Security Deposit for Rent payments or any other amount then due and unpaid, for payment of any amount for which Landlord has become obligated as a result of Tenant's default or breach, and for any loss or damage sustained by Landlord as a result of Tenant's default or breach. If Landlord so uses any of the Security Deposit, Tenant shall, within ten (10) days after written demand therefor, restore the Security Deposit to the full amount originally deposited. Tenant's failure to do so shall constitute an act of default hereunder and Landlord shall have the right to exercise any remedy provided for in Section 19. hereof.

If Tenant defaults under this Lease more than two (2) times during any calendar year, irrespective of whether such default is cured, then, without limiting Landlord's other rights and remedies, Landlord may, in Landlord's sole discretion, modify the amount of the required Security Deposit. Within ten (10) days after Notice of such modification, Tenant shall submit to Landlord the required additional sums. Tenant's failure to do so shall constitute an act of default, and Landlord shall have the right to exercise any remedy provided for in Section 19. hereof. Notwithstanding the foregoing, Tenant's secutirity deposit may be increased by a maximum of two (2) months additional rent.

If Tenant complies with all of the terms and conditions of this Lease, and Tenant is not in default on any of its obligations hereunder, then within the time period statutorily prescribed after Tenant vacates the Premises, Landlord shall promptly return to Tenant (or, at Landlord's option, to the last subtenant or assignee of Tenant's interest hereunder) the Security Deposit less any expenditures made by Landlord to repair damages to the Premises caused by Tenant and to clean the Premises upon expiration or earlier termination of this Lease.

In the event of bankruptcy or other debtor-creditor proceedings against Tenant, such Security Deposit shall be deemed to be applied first to the payment of Rent and other sums due Landlord for all periods prior to the filing of such proceedings.

9. TENANT'S USE OF THE PREMISES.

The provisions of this Section are for the benefit of the Landlord and are not nor shall they be construed to be for the benefit of any tenant of the Building or Project.

9.1. Use. Tenant shall use the Premises solely for the purposes set forth in Section 2.20. No change in the Use of the Premises shall be permitted, except as provided in this Section 9.

9.1.1. If, at any time during the Term hereof, Tenant desires to change the Use of the Premises, including any change in Use associated with a proposed assignment or sublet of the Premises, Tenant shall provide Notice to Landlord of its request for approval of such proposed change in Use. Tenant shall promptly supply Landlord with such information concerning the proposed change in Use as Landlord may reasonably request. Landlord shall have the right to approve such proposed change in Use, which approval shall not be unreasonably withheld. Landlord's consent to any change in Use shall not be construed as a consent to any subsequent change in Use.

9.2. Observance of Law. Tenant shall not use or occupy the Premises or permit anything to be done in or about the Premises in violation of any declarations, covenant, condition or restriction, or law, statute, ordinance or governmental rules, regulations or requirements now in force or which may hereafter be enacted or promulgated. Tenant shall, at its sole cost and expense, upon Notice from Landlord, immediately discontinue any use of the Premises which is declared by any governmental authority having jurisdiction to be a violation of law or of the Certificate of Occupancy. Tenant shall promptly comply, at its sole cost and expense, with all laws, statutes, ordinances and governmental rules, regulations or requirements now in force or which may hereafter be imposed which shall by reason of Tenant's Use or occupancy of the Premises, impose any duty upon Tenant or Landlord with respect to Tenant's Use or occupation. Further, Tenant shall, at Tenant's sole cost and expense, bring the Premises into compliance with all such laws, including the Americans With Disabilities Act of 1990, as amended (ADA), whether or not the necessity for compliance is triggered by Tenant's Use, and Tenant shall make, at its sole cost and expense, any changes to the Premises required to accommodate Tenant's employees with disabilities (any work performed pursuant to this Section shall be subject to the terms of Section 12. hereof). The judgment of any court of competent jurisdiction or the admission by Tenant in any action or proceeding against Tenant, whether Landlord is a party thereto or not, that Tenant has violated any such law, statute, ordinance, or governmental regulation, rule or requirement in the use or occupancy of the Premises, Building or Project shall be conclusive of that fact as between Landlord and Tenant. Notwithstanding the foregoing, Tenant shall not be responsible for bringing into complance existing doors with the Tenant's premises.

9.3. Insurance. Tenant shall not do or permit to be done anything which will contravene, invalidate or increase the cost of any insurance policy covering the Building or Project and/or property located therein, and shall

comply with all rules, orders, regulations, requirements and recommendations of Landlord's Insurance carrier(s) or any board of fire insurance underwriters or other similar body now or hereafter constituted, relating to or affecting the condition, use or occupancy of the Premises, excluding structural changes not

related to or affected by Tenant's improvements or acts. Tenant shall promptly upon demand reimburse Landlord for any additional premium charged for violation of this Section.

9.4. Nuisance and Waste. Tenant shall not do or permit anything to be done in or about the Premises which will in any way obstruct or interfere with the rights of other tenants or occupants of the Building or Project, or injure them, or use or allow the Premises to be used for any improper, unlawful or objectionable purpose. Tenant shall not cause, maintain or permit any nuisance in, on or about the Premises. Tenant shall not commit or suffer to be committed any waste in or upon the Premises.

9.5. Load and Equipment Limits. Tenant shall not place a load upon any floor of the Premises which exceeds the load per square foot which such floor was designed to carry as determined by Landlord or Landlord's structural engineer. The cost of any such determination made by Landlord's structural engineer in connection with Tenant's occupancy shall be paid by Tenant upon Landlord's demand. Tenant shall not install business machines or mechanical equipment which will in any manner cause noise objectionable to other tenants or injure, vibrate or shake the Premises or Building.

9.6. Hazardous Material. Tenant shall not create, generate, use, bring, allow, emit, dispose, or permit on the Premises, Building or Project any toxic or hazardous gaseous, liquid, or solid material or waste, or any other hazardous material defined or listed in any applicable federal, state or local law, rule, regulation or ordinance except for de minimis amounts of hazardous materials contained in ordinary office products or use an ordinary course of tenant's business provided that such usage shall be in compliance with all laws, and shall be subject to Tenant's indemnity obligations hereunder. Tenant shall comply with all applicable laws with respect to such hazardous material, including all laws affecting the use, storage and disposal thereof. If the presence of any hazardous material brought to the Premises, Building or Project by Tenant or Tenant's employees, agent or contractors results in contamination, Tenant shall promptly take all actions necessary, at Tenant's sole cost and expense, to remediate the contamination and restore the Premises, Building or Project to the condition that existed before introduction of such hazardous material. Tenant shall first obtain Landlord's approval of the proposed remedial action and shall keep Landlord informed during the process of remediation.

Tenant shall indemnify, defend and hold Landlord harmless from any claims, liabilities, costs or expenses incurred or suffered by Landlord arising from such bringing, allowing, using, permitting, generating, creating, emitting, or disposing of toxic or hazardous material whether or not consent to same has been granted by Landlord. Tenant's duty to defend, hold-harmless and indemnify Landlord hereunder shall survive the expiration or termination of this Lease. The consent requirement contained herein shall not apply to ordinary office products that may contain de minimis quantities of hazardous material; however, Tenant's indemnification obligations are not diminished with respect to the presence of such products. Tenant acknowledges that Tenant has an affirmative duty to immediately notify Landlord of any release or suspected release of hazardous material in the Premises or on or about the Project.

Medical waste and any other waste, the removal of which is regulated, shall be contracted for and disposed of by Tenant, at Tenant's expense, in accordance with all applicable laws and regulations. No material shall be placed in Project trash boxes, receptacles or Common Areas if the material is of such a nature that it cannot be disposed of in the ordinary and customary manner of removing and disposing of trash and garbage in the State without being in violation of any law or ordinance.

10. SERVICES AND UTILITIES.

Landlord agrees to furnish services and utilities to the Premises during normal business hours on generally recognized business days subject to the Rules and Regulations of the Building or Project. Services and utilities shall include reasonable quantities of heating, ventilation and air conditioning (HVAC) as required in Landlord's reasonable judgment for the comfortable use and occupancy of the Premises; lighting replacement for building standard lights; window washing and janitor services in a manner that such services are customarily furnished to comparable office buildings in the area. Landlord shall supply common area water for drinking, cleaning and restroom purposes only. Tenant, at Tenant's sole cost and expense, shall supply all paper and other products used within the Premises. During normal business hours on generally recognized business days, Landlord shall also maintain and keep lighted the common stairs, common entries and restrooms in the Building and shall furnish elevator service and restroom supplies. Further, Landlord shall also be responsible for snow and ice removal. If Tenant desires HVAC or other services at any other time, Landlord shall use reasonable efforts to furnish such service upon reasonable notice from Tenant, and Tenant shall pay Landlord's charges therefor on demand. Landlord may provide telecommunications lines and systems as discussed in Section 35. hereof. Notwithstanding the foregoing, the Premises will be seperately metered for lighting, plugs and HVAC. Further, Landlord shall also be responsible for snow and ice removal.

Notwithstanding the foregoing, Tenant shall obtain from Landlord at Tenant's sole cost and expense all electric utilities used at the Premises.

If permitted by law, Landlord shall have the right, in Landlord's reasonable discretion, at any time and from time to time during the Term, to contract for the provision of electricity (or any other utility) with, and to switch from, any company providing such utility. Tenant shall cooperate with Landlord and any such utility provider at all times, and, as reasonably

necessary, Tenant shall allow such parties access to the electric (or other utility) lines, feeders, risers, wiring and other machinery located within the Premises.

Landlord shall not be in default hereunder or be liable for any damages directly or indirectly resulting from, nor shall Rent be abated by reason of (a) the installation, use or interruption of use of any equipment in connection with the furnishing of any of the foregoing services, or (b) failure to furnish or delay in furnishing any such services where such failure or delay is caused by accident or any condition or event beyond the reasonable control of Landlord, or by the making of necessary repairs or improvements to the Premises, Building or Project, or (c) any change, failure, interruption, disruption or defect in the quantity or character of the electricity (or other utility) supplied to the Premises or Project, or (d) the limitation, curtailment or rationing of, or restrictions on, use of water, electricity, gas or any other form of energy serving the Premises, Building or Project. Landlord shall not be liable under any circumstances for a loss of or injury to property or business, however occurring, through, in connection with or incidental to the failure to furnish any such services. Notwithstanding the foregoing, Landlord shall use reasonable efforts to remedy the cause of interruption of services set forth herein.

Tenant shall not, without the prior written consent of Landlord, use any apparatus or device in the Premises, including, without limitation, electronic data processing machines, punch card machines, word processing equipment, personal computers, or machines using in excess of 120 volts, which consumes more electricity than is usually furnished or supplied for the use of desk top office equipment and photocopy equipment ordinarily in use in premises designated as general office space, as determined by Landlord. Tenant shall not connect any apparatus to electric current except through existing electrical outlets in the Premises.

Tenant shall not consume electric current in excess of that usually furnished or supplied for the use of premises as office space (as determined by Landlord), without first procuring the written consent of Landlord, which Landlord may refuse. In the event of consent, electrical current shall be separately metered in Tenant's name and paid for by Tenant. The cost or any such meter and its installation, maintenance and repair shall be paid by Tenant.

Notwithstanding anything contained herein to the contrary, if Tenant is granted the right to purchase electricity from a provider other than the company or companies used by Landlord, Tenant shall indemnify, defend, and hold harmless Landlord from and against all losses, claims, demands, expenses and judgments caused by, or directly or indirectly arising from, the acts or omissions of Tenant's electricity provider (including, but not limited to, expenses and/or fines incurred by Landlord in the event Tenant's electricity provider fails to provide sufficient power to the Premises, as well as damages resulting from the improper or faulty installation or construction of facilities or equipment in or on the Premises by Tenant or Tenant's electricity provider.

Nothing contained in this Section shall restrict Landlord's right to require at any time separate metering of utilities furnished to the Premises. If the separate metering of utilities furnished to the Premises is due to Tenant's excessive use of electric current, then the cost of any such meter and its installation, maintenance and repair shall be paid by Tenant. If Landlord requires separate metering for reasons other than Tenant's excessive consumption of electric current, then the cost of any such meter and its installation, maintenance and repair shall be paid by Landlord. In either event, accounts for all such separately metered utilities shall be in Tenant's name and paid for by Tenant. Notwithstanding the foregoing, the premise are currently seperately metered.

If Tenant uses heat generating machines or equipment in the Premises which effect the temperature otherwise maintained by the HVAC system, Landlord reserves the right to install supplementary air conditioning units in the Premises and the cost thereof, including the cost of installation, operation and maintenance thereof, shall be paid by Tenant to Landlord upon demand therefor.

11. REPAIRS AND MAINTENANCE.

11.1. Landlord's Obligations. Landlord shall make, at Landlord's sole expense, all structural repairs except as specified herein and shall maintain in good order, condition and repair the Building and all other portions of the Premises not the obligation of Tenant or of any other tenant in the Building. If applicable, Landlord shall also maintain in good order, condition and repair the ICN, the cost of which is reimbursable pursuant to Section 6.3.1.2. unless responsibility therefor is assigned to a particular tenant.

11.2. Tenant's Obligations.

11.2.1. Tenant shall, at Tenant's sole expense and except for services furnished by Landlord pursuant to Section 10. hereof, maintain the Premises in good order, condition and repair. For the purposes of this Section 11.2.1., the term Premises shall be deemed to include all items and equipment installed by or for the benefit of or at the expense of Tenant, including without limitation the interior surfaces of the ceilings, walls and floors; all doors; all interior windows; dedicated heating, ventilating and air conditioning equipment; all plumbing, pipes and fixtures; electrical switches and fixtures; internal wiring as it

connects to the ICN (if applicable); and Building Standard Tenant Improvements. Notwithstanding the foregoing, Landlord represents that all HVAC systems shall be in good working order as of the Lease Commencement Date.

11.2.2. Tenant shall be responsible for all repairs and alterations in and to the Premises, Building and Project and the facilities and systems thereof to the satisfaction of Landlord, the need for which arises out of (a) Tenant's use or occupancy of the Premises, (b) the installation, removal, use or operation of Tenant's Property (as defined in Section 13.) in the Premises, (c) the moving of Tenant's Property into or out of the Building, or (d) the act, omission, misuse or negligence of Tenant, its agents, contractors, employees or invitees.

11.2.3. If Tenant fails to maintain the Premises in good order, condition and repair, Landlord shall give Notice to Tenant to do such acts as are reasonably required to so maintain the Premises. If Tenant fails to promptly commence such work and diligently prosecute it to completion, then Landlord shall have the right to do such acts and expend such funds at the expense of Tenant as are reasonably required to perform such work.

11.3. Compliance with Law. Landlord and Tenant shall each do all acts necessary to comply with all applicable laws, statutes, ordinances, and rules of any public authority relating to their respective maintenance obligations as set forth herein. The provisions of Section 9.2. are deemed restated here.

11.4. Notice of Defect. If it is Landlord's obligation to repair, Tenant shall give Landlord prompt Notice, regardless of the nature or cause, of any damage to or defective condition in any part or appurtenance of the Building's mechanical, electrical, plumbing, HVAC or other systems serving, located in, or passing through the Premises.

11.5. Landlord's Liability. Except as otherwise expressly provided in this Lease, Landlord shall have no liability to Tenant nor shall Tenant's obligations under this Lease be reduced or abated in any manner by reason of any inconvenience, annoyance, interruption or injury to business arising from Landlord's making any repairs or changes which Landlord is required or permitted by this Lease or by any other tenant's lease or required by law to make in or to any portion of the Project, Building or Premises. Landlord shall nevertheless use reasonable efforts to minimize any interference with Tenant's conduct of its business in the Premises.

12. CONSTRUCTION, ALTERATIONS AND ADDITIONS.

12.1. Landlord's Construction Obligations. Landlord shall perform Landlord's Work to the Premises as described in Exhibit "D".

12.2. Tenant's Construction Obligations. Tenant shall perform Tenant's Work to the Premises as described in Exhibit "D" and shall comply with all of the provisions of this Section 12.

12.3. Tenant's Alterations and Additions. Except as provided in Section 12.2. above, and except for alterations which cost is less than $10,000 and which do not effect the HVAC, electrical, plumbing, structural or mechanical systems, Tenant shall not make any other additions, alterations or improvements to the Premises without obtaining the prior written consent of Landlord. Landlord's consent may be conditioned, without limitation, on Tenant removing any such additions, alterations or improvements upon the expiration of the Term and restoring the Premises to the same condition as on the date Tenant took possession. All work with respect to Tenant's Work described in Exhibit "D", as well as any addition, alteration or improvement, shall comply with all applicable laws, ordinances, codes and rules of any public authority (including, but not limited to the ADA) and shall be done in a good and professional manner by properly qualified and licensed personnel approved by Landlord. All work shall be diligently prosecuted to completion. Upon completion, Tenant shall furnish Landlord "as-built" plans. Prior to commencing any such work, Tenant shall furnish Landlord with plans and specifications; names and addresses of contractors; copies of all contracts; copies of all necessary permits; evidence of contractor's and subcontractor's insurance coverage for Builder's Risk at least as broad as Insurance Services Office (ISO) special causes of loss form CP 10 30, Commercial General Liability at least as broad as ISO CG 00 01, workers' compensation, employer's liability and auto liability, all in amounts reasonably satisfactory to Landlord; and indemnification in a form reasonably satisfactory to Landlord. The work shall be performed in a manner that will not interfere with the quiet enjoyment of the other tenants in the Building in which the Premises is located.

Landlord may require, in Landlord's sole discretion and at Tenant's sole cost and expense, that Tenant provide Landlord with a lien and completion bond in an amount equal to at least one and one-half (1-1/2) times the total estimated cost of any additions, alterations or improvements to be made in or to the Premises if alterations will exceed $10,000. Nothing contained in this Section 12.3. shall relieve Tenant of its obligation under Section 12.4. to keep the Premises, Building and Project free of all liens.

12.4. Payment. Subject to the Tenant Improvement Allowance set forth in Section 37 hereof. Tenant shall pay the costs of any work done on the Premises pursuant to Sections 12.2. and 12.3., and shall keep the Premises, Building and Project free and clear of liens of any kind. Tenant hereby indemnifies, and agrees to defend against and keep Landlord free and harmless from all liability, loss, damage, costs, attorneys' fees and any other expense incurred on account of claims by any person performing work or furnishing materials or supplies for Tenant or any person claiming under Tenant.

Tenant shall give Notice to Landlord at least ten (10) business days prior to the expected date of commencement of any work relating to alterations, additions or improvements to the Premises. Landlord retains the right to enter the Premises and post such notices as Landlord deems proper at any reasonable time.

12.5. Property of Landlord. Except as otherwise set forth herein, all additions, alterations and improvements made to the Premises shall become the property of Landlord and shall be surrendered with the Premises upon the expiration of the Term unless their removal is required by Landlord as provided in Section 12.3.; provided, however, Tenant's equipment, machinery and trade fixtures shall remain the Property of Tenant and shall be removed, subject to the provisions of Section 13.2.

13. LEASEHOLD IMPROVEMENTS; TENANT'S PROPERTY.

13.l. Leasehold Improvements. All fixtures, equipment (including air-conditioning or heating systems), improvements and appurtenances attached to or built into the Premises and/or Building at the commencement or during the Term of the Lease (Leasehold Improvements), whether or not by or at the expense of Tenant, shall be and remain a part of the Premises, shall be the property of Landlord and shall not be removed by Tenant, except as expressly provided in Section 13.2., unless Landlord, by Notice to Tenant not later than thirty (30) days prior to the expiration of the Term, elects to have Tenant remove any Leasehold Improvements installed by Tenant. In such case, Tenant, at Tenant's sole cost and expense and prior to the expiration of the Term, shall remove the Leasehold Improvements and repair any damage caused by such removal.

13.2. Tenant's Property. All signs, notices, displays, movable partitions, business and trade fixtures, machinery and equipment (excluding air-conditioning or heating systems, whether installed by Tenant or not), Tenant's personal telecommunications equipment and office equipment located in the Premises and acquired by or for the account of Tenant, without expense to Landlord, which can be removed without structural damage to the Building, and all furniture, furnishings and other articles of movable personal property owned by Tenant and located in the Premises (collectively, Tenant's Property) shall be and shall remain the property of Tenant and may be removed by Tenant at any time during the Term; provided that if any of Tenant's Property is removed, Tenant shall promptly repair any damage to the Premises or to the Building resulting from such removal, including without limitation repairing the flooring and patching and painting the walls where required by Landlord to Landlord's reasonable satisfaction, all at Tenant's sole cost and expense.

14. INDEMNIFICATION.

14.1. Tenant Indemnification. Tenant shall indemnify and hold Landlord harmless from and against any and all liability and claims of any kind for loss or damage to any person or property arising out of: (a) Tenant's use and occupancy of the Premises, or the Building or Project, or any work, activity or thing done, allowed or suffered by Tenant in, on or about the Premises, the Building or the Project; (b) any breach or default by Tenant of any of Tenant's obligations under this Lease; or (c) any negligent or otherwise tortious act or omission of Tenant, its agents, employees, subtenants, licensees, customers, guests, invitees or contractors (including agents or contractors who perform services or work outside of the Premises for Tenant). At Landlord's request, Tenant shall, at Tenant's expense, and by counsel satisfactory to Landlord, defend Landlord in any action or proceeding arising from any such claim. Tenant shall indemnify Landlord against all costs, attorneys' fees, expert witness fees and any other expenses or liabilities incurred in such action or proceeding. As a material part of the consideration for Landlord's execution of this Lease, Tenant hereby assumes all risk of damage or injury to any person or property in, on or about the Premises from any cause and Tenant hereby waives all claims in respect thereof against Landlord, except in connection with damage or injury resulting solely from the gross negligence or willful misconduct of Landlord or its authorized agents.

14.2. Landlord Not Liable. Landlord shall not be liable for injury or damage which may be sustained by the person or property of Tenant, its employees, invitees or customers, or any other person in or about the Premises, caused by or resulting from fire, steam, electricity, gas, water or rain which may leak or flow from or into any part of the Premises, or from the breakage, leakage, obstruction or other defects of pipes, sprinklers, wires, appliances, plumbing, air conditioning, lighting fixtures or mechanical or electrical systems, whether such damage or injury results from conditions arising upon the Premises or upon other portions of the Building or Project or from other sources, unless the condition was the result of Landlord's negligence or willful misconduct. Landlord shall not be liable for any damages arising from any act or omission of any other tenant of the Building or Project or for

the acts of persons in, on or about the Premises, Building or the Project who are not the authorized agents of Landlord or for losses due to theft, vandalism or like causes.

Tenant acknowledges that Landlord's election to provide mechanical surveillance or to post security personnel in the Building or on the Project is solely within Landlord's discretion. Landlord shall have no liability in connection with the decision whether or not to provide such services, and, to the extent permitted by law, Tenant hereby waives all claims based thereon.

15. TENANT'S INSURANCE.

15.1. Insurance Requirement. Tenant shall procure and maintain insurance coverage in accordance with the terms hereof, either as specific policies or within blanket policies. Coverage shall begin on the date Tenant is given access to the Premises for any purpose and shall continue until expiration of the Term, except as otherwise set forth in the Lease. The cost of such insurance shall be borne by Tenant.

Insurance shall be with insurers licensed to do business in the State, and reasonably acceptable [ILLEGIBLE] Landlord. The insurers must have a current A.M. Best's rating of not less than A:VII, or equivalent (as reasonably determined by Landlord) if the Best's rating system is discontinued.

Tenant shall furnish Landlord with original certificates and amendatory endorsements effecting coverage required by this Section 15. before the date Tenant is first given access to the Premises. All certificates and endorsements are to be received and approved by Landlord before any work commences. Landlord reserves the right to inspect and/or copy any insurance policy required to be maintained by Tenant hereunder, or to require complete, certified copies of all required insurance policies, including endorsements effecting the coverage require herein at any time. Tenant shall comply with such requirement within thirty (30) days of demand therefor by Landlord. Tenant shall furnish Landlord with renewal certificates and amendments or a "binder" of any such policy at least twenty (20) days prior to the expiration thereof. Each insurance policy required herein shall be endorsed to state that coverage shall not be canceled, except after thirty (30) days' prior written notice to Landlord and Landlord's lender (if such lender's address is provided).

The Commercial General Liability policy, as hereinafter required, shall contain, or be endorsed to contain, the following provisions: (a) Landlord and any parties designated by Landlord shall be covered as additional insureds as their respective interests may appear; and (b) Tenant's insurance coverage shall be primary insurance as to any insurance carried by the parties designated as additional insureds. Any insurance or self-insurance maintained by Landlord shall be excess of Tenant's insurance and shall not contribute with it.

15.2. Minimum Scope of Coverage. Coverage shall be at least as broad as set forth herein. However, if, because of Tenant's Use or occupancy of the Premises, Landlord determines, in Landlord's reasonable judgment, that additional insurance coverage or different types of insurance are necessary, then Tenant shall obtain such insurance at Tenant's expense in accordance with the terms of this Section 15.

15.2.1. Commercial General Liability (ISO occurrence form CG 00 01) which shall cover liability arising from Tenant's Use and occupancy of the Premises, its operations therefrom, Tenant's independent contractors, products-completed operations, personal injury and advertising injury, and liability assumed under an insured contract.

15.2.2. Workers' Compensation insurance as required by law, and Employers Liability insurance.

15.2.3. Commercial Property Insurance (ISO special causes of loss form CP 10 30) against all risk of direct physical loss or damage (including flood, if applicable), earthquake excepted, for: (a) all leasehold improvements (including any alterations, additions or improvements made by Tenant pursuant to the provisions of Section 12. hereof) in, on or about the Premises; and (b) trade fixtures, merchandise and Tenant's Property from time to time in, on or about the Premises. The proceeds of such property insurance shall be used for the repair or replacement of the property so insured. Upon termination of this Lease following a casualty as set forth herein, the proceeds under (a) shall be paid to Landlord, and the proceeds under (b) above shall be paid to Tenant.

15.2.4. Business Auto Liability.

Landlord shall, during the term hereof, maintain in effect similar insurance on the Building and Common Area.

15.2.5. Business Interruption and Extra Expense Insurance.

15.3. Minimum Limits of Insurance. Tenant shall maintain limits not less than:

15.3.1. Commercial General Liability: $1,000,000 per occurrence. If the insurance contains a general aggregate limit, either the general aggregate limit shall apply separately to this location or the general aggregate limit shall be at least twice the required occurrence limit.

15.3.2. Employer's Liability: $1,000,000 per accident for bodily injury or disease.

15.3.3. Commercial Property Insurance: 100% replacement cost with no coinsurance penalty provision.

15.3.4. Business Auto Liability: $1,000,000 per accident.

15.3.5. Business Interruption and Extra Expense Insurance: In a reasonable amount and comparable to amounts carried by comparable tenants in comparable projects.

15.4. Deductible and Self-Insured Retention. Any deductible or self-insured retention in excess of $5,000 per occurrence must be declared to and approved by Landlord. At the option of Landlord, either the insurer shall reduce or eliminate such deductible or self-insured retention or Tenant shall provide separate insurance conforming to this requirement.

15.5. Increases in Insurance Policy Limits. If the coverage limits set forth in this Section 15. are deemed inadequate by Landlord or Landlord's lender, then Tenant shall increase the coverage limits to the amounts reasonably recommended by either Landlord or Landlord's lender. Landlord agrees that any such required increases in coverage limits shall not occur more frequently than once every three (3) years.

15.6. Waiver of Subrogation. Landlord and Tenant each hereby waive all rights of recovery against the other and against the officers, employees, agents and representatives, contractors and invitees of the other, on account of loss by or damage to the waiving party or its property or the property of others under its control, to the extent that such loss or damage is insured against under any insurance policy which may have been in force at the time of such loss or damage.

15.7. Landlord's Right to Obtain Insurance for Tenant. If Tenant fails to obtain the insurance coverage or fails to provide certificates and endorsements as required by this Lease, Landlord may, at its option, obtain such insurance for Tenant. Tenant shall pay, as Additional Rent, the reasonable cost thereof together with a twenty-five percent (25%) service charge.

16. DAMAGE OR DESTRUCTION.

16.1. Damage. If, during the term of this Lease, the Premises or the portion of the Building necessary for Tenant's occupancy is damaged by fire or other casualty covered by fire and extended coverage insurance carried by Landlord, Landlord shall promptly repair the damage provided (a) such repairs can, in Landlord's opinion, be completed, under applicable laws and regulations, within one hundred eighty (180) days of the date a permit for such construction is issued by the governing authority, (b) insurance proceeds are available to pay eighty percent (80%) or more of the cost of restoration, and (c) Tenant performs its obligations pursuant to Section 16.4. hereof. In such event, this Lease shall continue in full force and effect, except that Tenant shall be entitled to a proportionate reduction of Rent to the extent Tenant's use at the Premises is impaired, commencing with the date of damage and continuing until completion of the repairs required of Landlord under Section 16.4.

Notwithstanding anything contained in the Lease to the contrary, in the event of partial or total damage or destruction of the Premises during the last twelve (12) months of the Term, either party shall have the option to terminate this Lease upon thirty (30) days prior Notice to the other party provided such Notice is served within thirty (30) days after the damage or destruction. For purposes of this Section 16.1., "partial damage or destruction" shall mean the damage or destruction of at least thirty-three and one-third percent (33 and 1/3%) of the Premises, as determined by Landlord in Landlord's reasonable discretion.

16.2. Repair of Premises in Excess of One Hundred Eighty Days. If in Landlord's opinion, such repairs to the Premises or portion of the Building necessary for Tenant's occupancy cannot be completed under applicable laws and regulations within one hundred eighty (180) days of the date a permit for such construction is issued by the governing authority, Landlord may elect, upon Notice to Tenant given within thirty (30) days after the date of such fire or other casualty, to repair such damage and to diligently prosecute repair to completion, in which event this Lease shall continue in full force and effect, but the Rent shall be partially abated as provided in Section 16.1. If Landlord does not so elect to make such repairs, this Lease shall terminate as of the date of such fire or other casualty.

16.3. Repair Outside Premises. If any other portion of the Building or Project is totally destroyed or damaged to the extent that in Landlord's opinion repair thereof cannot be completed under applicable laws and regulations within one hundred eighty (180) days of the date a permit for such construction is issued by the governing authority, Landlord may elect upon Notice to Tenant given within thirty (30) days after the date of such fire or other casualty, to repair such damage, in which event this Lease shall continue in full force and effect, but the Rent shall be partially abated as provided in Section 16.1. If Landlord does not elect to make such repairs, this Lease shall terminate as of the date of such fire or other casualty.

16.4. Tenant Repair. If the Premises are to be repaired under this Section 16., Landlord shall repair at its cost any injury or damage to the Building and Building Standard Tenant Improvements, if any. Notwithstanding anything contained herein to the contrary, Landlord shall not be obligated to perform work other than Landlord's Work performed previously pursuant to Section 12.1. hereof. Tenant shall be responsible at its sole cost and expense for the repair, restoration and replacement of any other Leasehold Improvements and Tenant's Property (as well as reconstructing and reconnecting Tenant's internal telecommunication wiring and related equipment). Landlord shall not be liable for any loss of business, inconvenience or annoyance arising from any repair or restoration of any portion of the Premises, Building or Project as a result of any damage from fire or other casualty.

16.5. Election Not to Perform Landlord's Work. Notwithstanding anything to the contrary contained herein, Landlord shall provide Notice to Tenant of its intent to repair or replace the Premises (if Landlord elects to perform such work), and, within ten (10) days of its receipt of such Notice, Tenant shall provide Notice to Landlord of its intent to reoccupy the Premises. Should Tenant fail to provide such Notice to Landlord, then such failure shall be deemed an election by Tenant not to re-occupy the Premises and Landlord may elect not to perform the repair or replacement of the Premises. Such election shall not result in a termination of this Lease and all obligations of Tenant hereunder shall remain in full force and effect, including the obligation to pay Rent.

16.6. Express Agreement. This Lease shall be considered an express agreement governing any case of damage to or destruction of the Premises, Building or Project by fire or other casualty, and any present or future law which purports to govern the rights of Landlord and Tenant in such circumstances in the absence of express agreement shall have no application.

17. EMINENT DOMAIN.

17.1. Whole Taking. If the whole of the Building or Premises is lawfully taken by condemnation or in any other manner for any public or quasi-public purpose, this Lease shall terminate as of the date of such taking, and Rent shall be prorated to such date.

l7.2. Partial Taking. If less than the whole of the Building or Premises is so taken, this Lease shall be unaffected by such taking, provided that (a) Tenant shall have the right to terminate this Lease by Notice to Landlord given within ninety (90) days after the date of such taking if twenty percent (20%) or more of the Premises is taken and the remaining area of the Premises is not reasonably sufficient for Tenant to continue operation of its business, and (b) Landlord shall have the right to terminate this Lease by Notice to Tenant given within ninety (90) days after the date of such taking. If either Landlord or Tenant so elects to terminate this Lease, the Lease shall terminate on the thirtieth (30th) calendar day after either such Notice. Rent shall be prorated to the date of termination. If this Lease continues in force upon such partial taking, Rent and Tenant's Proportionate Share shall be equitably adjusted according to the remaining Rentable Area of the Premises and Project.

17.3. Proceeds. In the event of any taking, partial or whole, all of the proceeds of any award, judgment or settlement payable by the condemning authority shall be the exclusive property of Landlord, and Tenant hereby assigns to Landlord all of its right, title and interest in any award, judgment or settlement from the condemning authority; however, Tenant shall have the right, to the extent that Landlord's award is not reduced or prejudiced, to claim from the condemning authority (but not from Landlord) such compensation as may be recoverable by Tenant in its own right for relocation expenses and damage to Tenant's Property and damage to Leasehold Improvements installed at the sole expense of Tenant.

17.4. Landlord's Restoration. In the event of a partial taking of the Premises which does not result in a termination of this Lease, Landlord shall restore the remaining portion of the Premises as nearly as practicable to its condition prior to the condemnation or taking; provided however, Landlord shall not be obligated to perform work other than Landlord's Work performed previously pursuant to Section 12.1. hereof. Tenant shall be responsible at its sole cost and expense for the repair, restoration and replacement of Tenant's Property and any other Leasehold Improvements.

18. ASSIGNMENT AND SUBLETTING.

No assignment of this Lease or sublease of all or any part of the Premises shall be permitted, except as provided in this Section 18.

18.1. No Assignment or Subletting. Tenant shall not, without the prior written consent of Landlord, assign or hypothecate this Lease or any interest herein or sublet the Premises or any part thereof, or permit the use of the Premises or any part thereof by any party other than Tenant. Any of the foregoing acts without such consent shall be voidable and shall, at the option of Landlord, constitute a default hereunder. This Lease shall not, nor shall any interest of Tenant herein, be assignable by operation of law without the prior written consent of Landlord.

18.1.1. For purposes of this Section 18., the following shall be deemed an assignment:

18.1.1.1. If Tenant is a partnership, any withdrawal or substitution (whether voluntary, involuntary, or by operation of law, and whether occurring at one time or over a period of time) of any partner(s) owning twenty-five (25%) or more (cumulatively) of any interest in the capital or profits of the partnership, or the dissolution of the partnership;

18.1.1.2. If Tenant is a corporation, any dissolution, merger, consolidation, or other reorganization of Tenant, any sale or transfer (or cumulative sales or transfers) of the capital stock of Tenant in excess of twenty-five percent (25%), or any sale (or cumulative sales) or transfer of fifty-one (51%) or more of the value of the assets of Tenant provided, however, the foregoing shall not apply to corporations the capital stock of which is publicly traded.

18.2. Landlord's Consent. If, at any time or from time to time during the Term hereof, Tenant desires to assign this Lease or sublet all or any part of the Premises, and if Tenant is not then in default under the terms of the Lease, Tenant shall submit to Landlord a written request for approval setting forth the terms and provisions of the proposed assignment or sublease, the Identity of the proposed assignee or subtenant, and a copy of the proposed form of assignment or sublease. Tenant's request for consent shall be submitted to Landlord at least thirty (30) days prior to the intended date of such transfer. Tenant shall promptly supply Landlord with such information concerning the business background and financial condition of such proposed assignee or subtenant as Landlord may reasonably request. Landlord shall have the right to approve such proposed assignee or subtenant, which approval shall not be unreasonably withheld or delayed. Landlord's consent to any assignment shall not be construed as a consent to any subsequent assignment, subletting, transfer of partnership interest or stock, occupancy or use.

18.2.1. Landlord's approval shall be conditioned, among other things, on Landlord's receiving adequate assurances of future performance under this Lease and any sublease or assignment. In determining the adequacy of such assurances, Landlord may base its decision on such factors as it deems appropriate, including but not limited to:

18.2.1.1. that the source of rent and other consideration due under this Lease, and, in the case of assignment, that the financial condition and operating performance and business experience of the proposed assignee and its guarantors, if any, shall be equal to or greater than the financial condition and operating performance and experience of Tenant and its guarantors, if any, as of the time Tenant became the lessee under this Lease;

18.2.1.2. that any assumption or assignment of this Lease will not result in increased cost or expense, wear and tear, greater traffic or demand for services and utilities provided by Landlord pursuant to Section 10. hereof and will not disturb or be detrimental to other tenants of Landlord;

18.2.1.3. whether the proposed assignee's use of the Premises will include the use of Hazardous Material, or will in any way increase any risk to Landlord relating to Hazardous Material; and

18.2.1.4. that assumption or assignment of such lease will not disrupt any tenant mix or balance in the Project.

18.2.2. Thc assignment or sublease shall be on the same terms and conditions set forth in the written request for approval given to Landlord, or, if different, upon terms and conditions consented to by Landlord;

18.2.3. No assignment or sublease shall be valid and no assignee or sublessee shall take possession of the Premises or any part thereof until an executed counterpart of such assignment or sublease has been delivered to Landlord;

18.2.4. No assignee or sublessee shall have a further right to assign or sublet except on the terms herein contained;

18.2.5. Any sums or other economic considerations received by Tenant as a result of such assignment or subletting, however denominated under the assignment or sublease, which exceed, in the aggregate (a) the total sums which Tenant is obligated to pay Landlord under this Lease (prorated to reflect obligations allocable to any portion of the Premises subleased), plus (b) any real estate brokerage commissions or fees payable to third parties in connection with such assignment or subletting, shall be shared equally by Tenant and Landlord as Additional Rent under this Lease without effecting or reducing any other obligations of Tenant hereunder.

If Landlord consents to the proposed transfer, Tenant shall deliver to Landlord three (3) fully executed original documents (in the form previously approved by Landlord) and Landlord shall attach its consent thereto. Landlord shall retain one (1) fully executed original document. No transfer of Tenant's interest in this Lease shall be deemed effective until the terms and conditions of this Section 18. have been fulfilled.

18.3. Tenant Remains Responsible. No subletting or assignment shall release Tenant of Tenant's obligations under this Lease or alter the primary liability of Tenant to pay the Rent and to perform all other obligations to be performed by Tenant hereunder. The acceptance of Rent by Landlord from any other person shall not be deemed to be a waiver by Landlord of any provision hereof. Consent to one assignment or subletting shall not be deemed consent to any subsequent assignment or subletting. In the event of default by an assignee or subtenant of Tenant or any successor of Tenant in the performance of any of the terms hereof, Landlord may proceed directly against Tenant without the necessity of exhausting remedies against such assignee, subtenant or successor. Landlord may consent to subsequent assignments or sublets of the Lease or amendments or modifications to the Lease with assignees of Tenant, without notifying Tenant, or any successor of Tenant, and without obtaining its or their consent thereto and any such actions shall not relieve Tenant of liability under this Lease.

18.4. Conversion to a Limited Liability Entity. Notwithstanding anything contained herein to the contrary, if Tenant is a limited or general partnership (or is comprised of two (2) or more persons, individually or as co-partners, or entities), the change or conversion of Tenant to (a) a limited liability company, (b) a limited liability partnership, or (c) any other entity which possesses the characteristics of limited liability (any such limited liability entity is collectively referred to herein as a "Successor Entity") shall be prohibited unless the prior written consent of Landlord is obtained, which consent may be withheld in Landlord's sole discretion.

18.4.1. Notwithstanding Section 18.4., Landlord agrees not to unreasonably withhold or delay such consent provided that:

18.4.1.1. The Successor Entity succeeds to all or substantially all of Tenant's business and assets;

18.4.1.2. The Successor Entity shall have a tangible net worth (Tangible Net Worth), determined in accordance with generally accepted accounting principles, consistently applied, of not less than the greater of the Tangible Net Worth of Tenant on (a) the date of execution of the Lease, or (b) the day immediately preceding the proposed effective date of such conversion; and

18.4.1.3. Tenant is not in default of any of the terms, covenants, or conditions of this Lease on the propose effective date of such conversion.

18.5. Payment of Fees. If Tenant assigns the Lease or sublets the Premises or requests the consent of Landlord to any assignment, subletting or conversion to a limited liability entity, then Tenant shall, upon demand, pay Landlord, whether or not consent is ultimately given, an administrative fee of Three Hundred and 00/100 Dollars ($300.00) plus costs and other reasonable expenses incurred by Landlord in connection with each such act or request.

19. DEFAULT.

19.1. Tenant's Default. The occurrence of any one or more of the following events shall constitute a default and breach of this Lease by Tenant.

19.1.1. If Tenant abandons or vacates the Premises, and fails to pay rent therefor.

19.1.2. If Tenant fails to pay any Rent or Additional Rent or any other charges required to be paid by Tenant under this Lease and such failure continues for three (3) days after receipt of Notice thereof from Landlord to Tenant.

19.1.3. If Tenant fails to promptly and fully perform any other covenant, condition or agreement contained in this Lease and such failure continues for thirty (30) days after Notice thereof from Landlord to Tenant, or, if such default cannot reasonably be cured within thirty (30) days, if Tenant fails to commence to cure within that thirty (30) day period and diligently prosecute to completion.

19.1.4. Tenant's failure to occupy the Premises within ten (10) days after delivery of possession (as defined in Section 4. hereof).

19.1.5. Tenant's failure to provide any document, instrument or assurance as required by Sections 12., 15., 18. and/or 35. if the failure continues for ten (10) days after receipt of Notice from Landlord to Tenant.

19.1.6. To the extent provided by law:

19.1.6.1. If a writ of attachment or execution is levied on this Lease or on substantially all of Tenant's Property; or

19.1.6.2. If Tenant or Tenant's Guarantor makes a general assignment for the benefit of creditors; or

19.1.6.3. If Tenant files a voluntary petition for relief or if a petition against Tenant in a proceeding under the federal bankruptcy laws or other insolvency laws is filed and not withdrawn or dismissed within sixty (60) days thereafter, or if under the provisions of any law providing for reorganization or winding up of corporations, any court of competent jurisdiction assumes jurisdiction, custody or control of Tenant or any substantial part of its property and such jurisdiction, custody or control remains in force unrelinquished, unstayed or unterminated for a period of sixty (60) days; or

19.1.6.4. If in any proceeding or action in which Tenant is a party, a trustee, receiver, agent or custodian is appointed to take charge of the Premises or Tenant's Property (or has the authority to do so); or

19.1.6.5. If Tenant is a partnership or consists of more than one (1) person or entity, if any partner of the partnership or other person or entity is involved in any of the acts or events described in Sections 19.1.6.1. through 19.1.6.4. above.

19.2. Landlord Remedies. In the event of Tenant's default hereunder, then, in addition to any other rights or remedies Landlord may have under any law or at equity, Landlord shall have the right to collect interest on all past due sums (at the maximum rate permitted by law to be charged by an individual), and, at Landlord's option and without further notice or demand of any kind, to do the following:

19.2.1. Terminate this Lease and Tenant's right to possession of the Premises and reenter the Premises and take possession thereof, and Tenant shall have no further claim to the Premises or under this Lease; or

19.2.2. Continue this Lease in effect, reenter and occupy the Premises for the account of Tenant, and collect any unpaid Rent or other charges which have or thereafter become due and payable; or

l9.2.3. Reenter the Premises under the provisions of Section 19.2.2., and thereafter elect to terminate this Lease and Tenant's right to possession of the Premises.

If Landlord reenters the Premises under the provisions of Sections 19.2.2. or 19.2.3. above, Landlord shall not be deemed to have terminated this Lease or the obligation of Tenant to pay any Rent or other charges thereafter accruing unless Landlord notifies Tenant in writing of Landlord's election to terminate this Lease. Acts of maintenance, efforts to relet the Premises or the appointment of a receiver on Landlord's initiative to protect Landlord's interest under this Lease shall not constitute a termination of Tenant's obligations under the Lease. In the event of any reentry or retaking of possession by Landlord, Landlord shall have the right, but not the obligation, to remove all or any part of Tenant's Property in the Premises and to place such property in storage at a public warehouse at the expense and risk of Tenant. Landlord shall use reasonable efforts to relet the Premises. If Landlord relets the Premises for the account of Tenant, the rent received by Landlord from such reletting shall be applied as follows: first, to the payment of any indebtedness other than Rent due hereunder from Tenant to Landlord; second, to the payment of reasonable any costs of such reletting; third, to the payment of the cost of any alterations or repairs to the Premises; fourth to the payment of Rent due and unpaid hereunder; and the balance, if any, shall be held by Landlord and applied in payment of future Rent as it becomes due. If that portion of Rent received from the reletting which is applied against the Rent due hereunder is less than the amount of the Rent due, Tenant shall pay the deficiency to Landlord promptly upon demand by Landlord. Such deficiency shall be calculated and paid monthly. Tenant shall also pay to Landlord, as soon as determined, any costs and expenses incurred by Landlord in connection with such reletting or in making alterations and repairs to the Premises which are not covered by the rent received from the

reletting.

19.3. Damages Recoverable. Should Landlord elect to terminate this Lease under the provisions of Section 19.2., Landlord may recover as damages from Tenant the following:

19.3.1. Past Rent. The worth at the time of the award of any unpaid Rent that had been earned at the time of termination including the value of any Rent that was abated during the Term of the Lease (except Rent that was abated as a result of damage or destruction or condemnation); plus

19.3.2. Rent Prior to Award. The worth at the time of the award of the amount by which the unpaid Rent that would have been earned between the time of the termination and the time of the award exceeds the amount of unpaid Rent that Tenant proves could reasonably have been avoided; plus

19.3.3. Rent After Award. The worth at the time of the award of the amount by which the unpaid Rent for the balance of the Term after the time of award exceeds the amount of the unpaid Rent that Tenant proves could be reasonably avoided; plus

19.3.4. Proximately Caused Damages. Any other amount necessary to compensate Landlord for all detriment proximately caused by Tenant's failure to perform its obligations under this Lease or which in the ordinary course of things would be likely to result therefrom, including, but not limited to, any costs or expenses (including attorneys' fees), incurred by Landlord in (a) retaking possession of the Premises, (b) maintaining the Premises after Tenant's default, (e) preparing the Premises for reletting to a new tenant, including any repairs or alterations, and (d) reletting the Premises, including brokers' commissions.

"The worth at the time of the award" as used in Sections 19.3.1. and 19.3.2. above, is to be computed by allowing interest at the maximum rate permitted by law to be charged by an individual. "The worth at the time of the award" as used in Section 19.3.3. above, is to be computed by discounting the amount at the discount rate of the Federal Reserve Bank situated nearest to the Premises at the time of the award plus one percent (1%).

19.4. Landlord's Right to Cure Tenant's Default. If Tenant defaults in the performance of any of its obligations under this Lease and Tenant has not timely cured the default after Notice, Landlord may (but shall not be obligated to), without waiving such default, perform the same for the account and at the expense of Tenant. Tenant shall pay Landlord all costs of such performance immediately upon written demand therefor, and if paid at a later date these costs shall bear interest at the maximum rate permitted by law to be charged by an individual.

19.5. Landlord's Default. If Landlord fails to perform any covenant, condition or agreement contained in this Lease within thirty (30) days after receipt of Notice from Tenant specifying such default, or, if such default cannot reasonably be cured within thirty (30) days if Landlord fails to commence to cure within that thirty (30) day period and diligently prosecute to completion, then Landlord shall be liable to Tenant for any damages sustained by Tenant as a result of Landlord's breach; provided, however, it is expressly understood and agreed that if Tenant obtains a money judgment against Landlord resulting from any default or other claim arising under this Lease, that judgment shall be satisfied only out of the rents, issues, profits, and other income actually received on account of Landlord's right, title and interest in the Premises, Building or Project, and no other real, personal or mixed property of Landlord (or of any of the partners which comprise Landlord, if any), wherever situated, shall be subject to levy to satisfy such judgment.

19.6. Mortgagee Protection. Tenant agrees to send by certified or registered mail to any first mortgagee or first deed of trust beneficiary of Landlord whose address has been furnished to Tenant, a copy of any notice of default served by Tenant on Landlord. If Landlord fails to cure such default within the time provided for in this Lease, then such mortgagee or beneficiary shall have such additional time to cure the default as is reasonably necessary under the circumstances.

19.7. Tenant's Right to Cure Landlord's Default. If, after Notice to Landlord of default, Landlord (or any first mortgagee or first deed of trust beneficiary of Landlord) fails to cure the default as provided herein, then Tenant shall have the right to cure that default at Landlord's expense. Tenant shall not have the right to terminate this Lease or to withhold, reduce or offset any amount against any payments of Rent or any other charges due and payable under this Lease except as otherwise specifically provided herein. Tenant expressly waives the benefits of any statute now or hereafter in effect which would otherwise afford Tenant the right to make repairs at Landlord's expense or to terminate this Lease because of Landlord's failure to keep the Premises in good order, condition and repair. Notwithstanding anything herein to the contrary, Landlord shall use reasonable efforts to relet the Premises and to otherwise mitigate its damages following a Tenants default.

20. WAIVER.

No delay or omission in the exercise of any right or remedy of Landlord upon any default by Tenant shall impair such right or remedy or be construed as a waiver of such default. The receipt and acceptance by Landlord of delinquent Rent shall

not constitute a waiver of any

other default; it shall constitute only a waiver of timely payment for the particular Rent payment involved (excluding the collection of a late charge or interest).

No act or conduct of Landlord, including, without limitation, the acceptance of keys to the Premises, shall constitute an acceptance of the surrender of the Premises by Tenant before the expiration of the Term. Only written acknowledgement from Landlord to Tenant shall constitute acceptance of the surrender of the Premises and accomplish a termination of this Lease.

Landlord's consent to or approval of any act by Tenant requiring Landlord's consent or approval shall not be deemed to waive or render unnecessary Landlord's consent to or approval of any subsequent act by Tenant.

Any waiver by Landlord of any default must be in writing and shall not be a waiver of any other default concerning the same or any other provision of this Lease.

21. SUBORDINATION AND ATTORNMENT.

This Lease is and shall be subject and subordinate to all ground or underlying leases (including renewals, extensions, modifications, consolidations and replacements thereof) which now exist or may hereafter be executed affecting the Building or the land upon which the Building is situated, or both, and to the lien of any mortgages or deeds of trust in any amount or amounts whatsoever (including renewals, extensions, modifications, consolidations and replacements thereof) now or hereafter placed on or against the Building or on or against Landlord's interest or estate therein, or on or against any ground or underlying lease, without the necessity of the execution and delivery of any further instruments on the part of Tenant to effectuate such subordination. Nevertheless, Tenant covenants and agrees to execute and deliver upon demand, without charge therefor, such further instruments evidencing such subordination of this Lease to such ground or underlying leases, and to the lien of any such mortgages or deeds of trust as may be required by Landlord. Notwithstanding the foregoing, Landlord will use reasonable efforts to help Tenant obtain a Subordination and Non-Disturbance Agreement, at no cost to Landlord.

Notwithstanding anything contained herein to the contrary, if any mortgagee, trustee or ground lessor shall elect that this Lease is senior to the lien of its mortgage, deed of trust or ground lease, and shall give written notice thereof to Tenant, this Lease shall be deemed prior to such mortgage, deed of trust or ground lease, whether this Lease is dated prior or subsequent to the date of said mortgage, deed of trust, or ground lease, or the date of the recording thereof.

In the event of any foreclosure sale, transfer in lieu of foreclosure or termination of the lease in which Landlord is lessee, Tenant shall attorn to the purchaser, transferee or lessor as the case may be, and recognize that party as Landlord under this Lease, provided such party acquires and accepts the Premises subject to this Lease.

22. TENANT ESTOPPEL CERTIFICATES.

22.1. Landlord Request for Estoppel Certificate. Within fifteen (15) days after written request from Landlord, Tenant shall execute and deliver to Landlord or Landlord's designee, in the form requested by Landlord, a written statement certifying, among other things, (a) that this Lease is unmodified and in full force and effect, or that it is in full force and effect as modified and stating the modifications; (b) the amount of Base Rent and the date to which Base Rent and Additional Rent have been paid in advance; (c) the amount of any security deposited with Landlord; and (d) that Landlord is not in default hereunder or, if Landlord is claimed to be in default, stating the nature of any claimed default. Any such statement may be conclusively relied upon by a prospective purchaser, assignee or encumbrancer of the Premises.

22.2. Failure to Execute. Tenant's failure to execute and deliver such statement within the time required shall at Landlord's election be a default under this Lease (within five (5) days of Landlord giving Tenant a Notice of Default and an opportunity to cure) and shall also be conclusive upon Tenant that: (a) this Lease is in full force and effect and has not been modified except as represented by Landlord; (b) there are no uncured defaults in Landlord's performance and that Tenant has no right of offset, counter-claim or deduction against Rent and (c) not more than one month's Rent has been paid in advance.

23. NOTICE.

Notice shall be in writing and shall be deemed duly served or given if personally delivered, sent by certified or registered U.S. Mail, postage prepaid with a return receipt requested, or sent by overnight courier service, fee prepaid with a return receipt requested, as follows: (a) if to Landlord, to Landlord's Address for Notice with a copy to the Building manager, and (b) if to Tenant, to Tenant's Mailing Address; provided, however, Notices to Tenant shall be deemed duly served or given if delivered or sent to Tenant at the Premises. Landlord and Tenant may from time to time by Notice to the other designate another place for receipt of future Notice. Notwithstanding anything contained herein to the contrary, when an applicable

State statute requires service of Notice in a particular manner, service of that Notice in accordance with those particular requirements shall replace rather than supplement any Notice requirement set forth in the Lease.

24. TRANSFER OF LANDLORD'S INTEREST.

In the event of any sale or transfer by Landlord of the Premises, Building or Project, and assignment of this Lease by Landlord, Landlord shall be and is hereby entirely freed and relieved of any and all liability and obligations contained in or derived from this Lease arising out of any act, occurrence or omission relating to the Premises, Building, Project or Lease occurring after the consummation of such sale or transfer, provided the purchaser shall expressly assume all of the covenants and obligations of Landlord under this Lease. This Lease shall not be affected by any such sale and Tenant agrees to attorn to the purchaser or assignee provided all Landlord's obligation hereunder are assumed by such transferee. If any security deposit or prepaid Rent has been paid by Tenant, Landlord shall transfer the security deposit or prepaid Rent to Landlord's successor and upon such transfer, Landlord shall be relieved of any and all further liability with respect thereto.

25. SURRENDER OF PREMISES.

25.1. Clean and Same Condition. Upon the Expiration Date or earlier termination of this Lease, Tenant shall peaceably surrender the Premises to Landlord clean and in the same condition as when received, except for (a) reasonable wear and tear, (b) loss by fire or other casualty, and (c) loss by condemnation. Tenant shall remove Tenant's Property no later than the Expiration Date. If Tenant is required by Landlord to remove any additions, alterations, or improvements under Section 12.3., Tenant shall complete such removal no later than the Expiration Date. Any damage to the Premises, including any structural damage, resulting from removal of any addition, alteration, or improvement made pursuant to Section 12.3. and/or from Tenant's use or from the removal of Tenant's Property pursuant to Section 13.2. shall be repaired (in accordance with Landlord's reasonable direction) no later than the Expiration Date by Tenant at Tenant's sole cost and expense. On the Expiration Date Tenant shall surrender all keys to the Premises.

25.2. Failure to Deliver Possession. If Tenant fails to vacate and deliver possession of the Premises to Landlord on the expiration or sooner termination of this Lease as required by Section 25.1., Tenant shall indemnify, defend and hold Landlord harmless from all claims, liabilities and damages resulting from Tenant's failure to vacate and deliver possession of the Premises, including, without limitation, claims made by a succeeding tenant resulting from Tenant's failure to vacate and deliver possession of the Premises and rental loss which Landlord suffers.

25.3. Property Abandoned. If Tenant abandons or surrenders the Premises, or is dispossessed by process of law or otherwise, any of Tenant's Property left on the Premises shall be deemed to be abandoned, and, at Landlord's option, title shall pass to Landlord under this Lease as by a bill of sale. If Landlord elects to remove all or any part of such Tenant's Property, the cost of removal, including repairing any damage to the Premises or Building caused by such removal, shall be paid by Tenant.

26. HOLDING OVER.

Tenant shall not occupy the Premises after the Expiration Date without Landlord's consent. If after expiration of the Term, Tenant remains in possession of the Premises with Landlord's permission (express or implied), Tenant shall become a tenant from month to month only upon all the provisions of this Lease (except as to the term and Base Rent). Monthly installments of Base Rent payable by Tenant during this period shall be increased to one hundred fifty percent (150%) of the Monthly Installments of Base Rent payable by Tenant in the final month of the Term. Such monthly rent shall be payable in advance on or before the first day of each month. The tenancy may be terminated by either party by delivering a thirty (30) day Notice to the other party. Nothing contained in this Section 26. shall be construed to limit or constitute a waiver of any other rights or remedies available to Landlord pursuant to this Lease or at law.

27. RULES AND REGULATIONS.

Tenant agrees to comply with (and cause its agents, contractors, employees and invitees to comply with) the rules and regulations attached hereto as Exhibit "E" and with such reasonable modifications thereof and additions thereto as Landlord may from time to time make. Landlord agrees to enforce the rules and regulations uniformly against all tenants of the Project. Landlord shall not be liable, however, for any violation of said rules and regulations by other tenants or occupants of the Building or Project.

28. CERTAIN RIGHTS RESERVED BY LANDLORD.

Landlord reserves the following rights, exercisable without (a) liability to Tenant for damage or injury to property, person or business; (b) being found to have caused an actual or constructive eviction from the Premises; or (c) being found to have disturbed Tenant's use or possession of the Premises.

28.1. To name the Building and Project and to change the name or street address of the Building or Project.

28.2. To install and maintain all signs on the exterior and interior of the Building and Project.

28.3. To have pass keys to the Premises and all doors within the Premises, excluding Tenant's files, vaults and safes.

28.4. To stripe or re-stripe, re-surface, enlarge, change the grade or drainage of and control access to the parking lot; to assign and reassign spaces for the exclusive or nonexclusive use of tenants (including Tenant); and to locate or relocate parking spaces assigned to Tenant.

28.5. At any time during the Term, and on prior telephonic notice to Tenant, to inspect the Premises, and to show the Premises to any person having an existing or prospective interest in the Project or Landlord, and during the last six months of the Term, to show the Premises to prospective tenants thereof.

28.6. To enter the Premises for the purpose of making inspections, repairs, alterations, additions or improvements to the Premises or the Building (including, without limitation, checking, calibrating, adjusting or balancing controls and other parts of the HVAC system), and to take all steps as may be necessary or desirable for the safety, protection, maintenance or preservation of the Premises or the Building or Landlord's interest therein, or as may be necessary or desirable for the operation or improvement of the Building or in order to comply with laws, orders or requirements of governmental or other authority. Landlord agrees to use its best efforts (except in an emergency) to minimize interference with Tenant's business in the Premises in the course of any such entry.

28.7. To exclusively regulate and control use of the Common Area.

29. ADVERTISEMENTS AND SIGNS.

Tenant shall not affix, paint, erect or inscribe any sign, projection, awning, signal or advertisement of any kind to any part of the Premises, Building or Project, including without limitation the inside or outside of windows or doors, without the prior written consent of Landlord. Landlord shall have the right to remove any signs or other matter installed without Landlord's permission, without being liable to Tenant by reason of such removal, and to charge the cost of removal to Tenant as Additional Rent hereunder, payable within ten (10) days of written demand by Landlord. Landlord shall remove the existing outside sign on the property. Tenant shall have the right to place a sign on the outside of the Building, at no cost to the Landlord, subject to the rules and regulations of the Town of Westford and the State of Massachusetts if applicable.

31. GOVERNMENT ENERGY OR UTILITY CONTROLS.

In the event of imposition of federal, state or local government controls, rules, regulations, or restrictions on the use or consumption of energy or other utilities (including telecommunications) during the Term, both Landlord and Tenant shall be bound thereby. In the event of a difference in interpretation by Landlord and Tenant of any such controls, the interpretation of Landlord shall prevail and Landlord shall have the right to enforce compliance therewith, including the right of entry into the Premises to effect compliance.

32. FORCE MAJEURE.

Any prevention, delay or stoppage of work to be performed by Landlord or Tenant which is due to strikes, labor disputes, inability to obtain labor, materials, equipment or reasonable substitutes therefor, acts of God, governmental restrictions or regulations or controls, judicial orders, enemy or hostile government actions, civil commotion, fire or other casualty, or other causes beyond the reasonable control of the party obligated to perform hereunder, shall excuse performance of the work by that party for a period equal to the duration of that prevention, delay or stoppage. Nothing in this Section 32. shall excuse or delay Tenant's obligation to pay Rent or other charges under this Lease.

33. BROKERAGE FEES.

Tenant warrants and represents that it has not dealt with any real estate broker or agent in connection with this Lease or its negotiation except the Listing and Leasing Agent(s) set forth in Section 2.9. of this Lease. Tenant shall indemnify, defend and hold Landlord harmless from any cost, expense or liability (including costs of suit and reasonable attorneys' fees) for any compensation, commission or fees claimed by any other real estate broker or agent in connection with this Lease or its negotiation by reason of any act of Tenant.

34. QUIET ENJOYMENT.

Tenant shall, upon payment of Rent and performance of all of its obligations under this Lease, peaceably, quietly and exclusively enjoy possession of the Premises without unwarranted interference by Landlord or anyone acting or claiming through Landlord, subject to the terms of this Lease and to any mortgage, lease, or other agreement to which this Lease may be subordinate.

35. TELECOMMUNICATIONS.

35.1. Telecommunications Companies. Tenant and Tenant's telecommunications companies, including but not limited to local exchange telecommunications companies and alternative access vendor services companies ("Telecommunications Companies"), shall have no right of access to and within the lands or Buildings comprising the Project for the installation and operation of telecommunications lines and systems including but not limited to voice, video, data, and any other telecommunications services provided over wire, fiber optic, microwave, wireless and any other transmission systems, for part or all of Tenant's telecommunications within the Building and from the Building to any other location (hereinafter collectively referred to as "Telecommunications Lines"), without Landlord's prior written consent, which Landlord may withhold in its sole and absolute discretion. Notwithstanding the foregoing, Tenant may perform any installation, repair and maintenance to its Telecommunications Lines without Landlord's consent where the equipment being installed, repaired or maintained is not located in an area in which the Telecommunications Lines or any part thereof of any other tenant or of Landlord are located.

35.2. Tenant's Obligations. If at any time, Tenant's Telecommunications Companies or appropriate governmental authorities relocate the point of demarcation from the location of Tenant's telecommunications equipment in Tenant's telephone equipment room or other location, to some other point, or in any other manner transfer any obligations or liabilities for telecommunications to Landlord or Tenant, whether by operation of law or otherwise, upon Landlord's election, Tenant shall, at Tenant's sole expense and cost: (1) within thirty (30) days after notice is first given to Tenant of Landlord's election, cause to be completed by an appropriate telecommunications engineering entity approved in advance in writing by Landlord, all details of the Telecommunications Lines serving Tenant in the Building which details shall include all appropriate plans, schematics, and specifications; and (2) if Landlord so elects, immediately undertake the operation, repair and maintenance of the Telecommunications Lines serving Tenant in the Building; and (3) upon the termination of the Lease for any reason, or upon expiration of the Lease, immediately effect the complete removal of all or any portion or portions of the Telecommunications Lines serving Tenant in the Building and repair any damage caused thereby (to Landlord's reasonable satisfaction).

Prior to the commencement of any alterations, additions, or modifications to the Telecommunications Lines serving Tenant in the Building, except for minor changes, Tenant shall first obtain Landlord's prior written consent by written request accompanied by detailed plans, schematics, and specifications showing all alterations, additions and modifications to be performed, with the time schedule for completion of the work, and the identity of the entity which will perform the work, for which, except as otherwise provided in Section 35.3. below, Landlord may withhold consent in its sole and absolute discretion.

35.3. Landlord's Consent. Without in any way limiting Landlord's right to withhold its consent to a proposed request for access, or for alterations, additions or modifications of the Telecommunications Lines serving Tenant in the Building, Landlord shall consider the following factors in making its determination:

35.3.1. If the proposed actions of Tenant and its Telecommunications Companies will impose new obligations on Landlord, or expose Landlord to liability of any nature or description, or increase Landlord's insurance costs for the Building, or create liabilities for which Landlord is unable to obtain insurance protection, or imperil Landlord's insurance coverage;

35.3.2. If Tenant's Telecommunications Companies are unwilling to pay reasonable monetary compensation for the use and occupation of the Building for the Telecommunications Lines;

35.3.3. If Tenant and its Telecommunications Companies would cause any work to be performed that would adversely affect the land and Building or any space in the Building in any manner;

35.3.4. If Tenant encumbers or mortgages its interest in any telecommunications wiring or cabling; or

35.3.5. If Tenant is in default under this Lease.

35.4. Indemnification. Tenant shall indemnify, defend and hold harmless Landlord and its employees, agents, officers, and directors from and against any claims, demands, penalties, fines, liabilities, settlements, damages, costs, or expenses of any kind or nature, known or unknown, contingent or otherwise, arising out of or in any way related to the acts and omissions of Tenant, Tenant's officers, directors, employees, agents, contractors, subcontractors, subtenants, and invitees with respect to (1) any Telecommunications Lines serving Tenant in the Building which are on, from, or affecting the Project and Building; (2) any bodily injury (including wrongful death) or property damage (real or personal) arising out of or related to any Telecommunications Lines serving Tenant in the Building which are on, from, or affecting the Building; (3) any lawsuit brought or threatened, settlement reached, or governmental order relating to such Telecommunications Lines; (4) any violations of laws, orders, regulations, requirements, or demands of governmental authorities, or any reasonable policies or requirements of Landlord, which are based upon or in any way related to such Telecommunications Lines, including, without limitation, attorney and consultant fees, court costs, and litigation expenses. This indemnification and hold harmless agreement will survive this Lease. Under no circumstances shall Landlord be required to maintain, repair or replace any Building systems or any portions thereof, when such maintenance, repair or replacement is caused in whole or in part by the failure of any such system or any portions thereof, and/or the requirements of any governmental authorities. Under no circumstances shall Landlord be liable for interruption in telecommunications services to Tenant or any other entity affected, for electrical spikes or surges, or for any other cause whatsoever, whether by Act of God or otherwise, even if the same is caused by the ordinary negligence of Landlord, Landlord's contractors, subcontractors, or agents or other tenants, subtenants, or their contractors, subcontractors, or agents.

35.5. Landlord's Operation of Building Telecommunications Lines and Systems. Notwithstanding anything contained herein to the contrary, if the point of demarcation is relocated, Landlord may, but shall not be obligated to, undertake the operation, repair and maintenance of telecommunications lines and systems in the Building. If Landlord so elects, Landlord shall give Notice of its intent to do so, and Landlord shall, based on Landlord's sole business discretion, make such lines and systems available to tenants of the Building (including Tenant) in the manner it deems most prudent. Landlord may include in Operating Expenses all or a portion of the expenses related to the operation, repair and maintenance of the telecommunications lines and systems.

36. MISCELLANEOUS.

36.1. Accord and Satisfaction; Allocation of Payments. No payment by Tenant or receipt by Landlord of a lesser amount than the Rent provided for in this Lease shall be deemed to be other than on account of the earliest due Rent, nor shall any endorsement or statement on any check or letter accompanying any check or payment as Rent be deemed an accord and satisfaction, and Landlord may accept such check or payment without prejudice to Landlord's right to recover the balance of the Rent or pursue any other remedy provided for in this Lease. In connection with the foregoing, Landlord shall have the absolute right in its sole discretion to apply any payment received from Tenant to any account or other payment of Tenant then not current and due or delinquent.

36.2. Addenda. If any provision contained in an addendum to this Lease is inconsistent with any other provision herein, the provision contained in the addendum shall control, unless otherwise provided in the addendum.

36.3. Captions and Section Numbers. The captions appearing in the body of this Lease have been inserted as a matter of convenience and for reference only and in no way define, limit or enlarge the scope or meaning of this Lease. All references to Section numbers refer to Sections in this Lease.

36.4. Changes Requested by Lender. Neither Landlord nor Tenant shall unreasonably withhold its consent to changes or amendments to this Lease requested by the lender on Landlord's interest, so long as such changes do not alter the basic business terms of this Lease or otherwise materially diminish any rights or materially increase any obligations of the party from whom consent to such change or amendment is requested.

36.5. Choice of Law. This Lease shall be construed and enforced in accordance with the Laws of the State.

36.6. Consent. Notwithstanding anything contained in this Lease to the contrary, Tenant shall have no claim, and hereby waives the right to any claim against Landlord for money damages, by reason of any refusal, withholding or delay by Landlord of any consent, approval or statement of satisfaction, and, in such event, Tenant's only remedies therefor shall be an action for specific performance, injunction or declaratory judgment to enforce any right to such consent, approval or statement of satisfaction.

36.7. Authority. If Tenant is not an individual signing on his or her own behalf, then each individual signing this Lease on behalf of the business entity that constitutes Tenant represents and warrants that the individual is duly authorized to execute and deliver this Lease on behalf of the business entity, and that this Lease is binding on Tenant in accordance with its terms. Tenant shall, at Landlord's request, deliver a certified copy of a resolution of its board of directors, if Tenant is a corporation, or other memorandum of resolution if Tenant is a limited partnership, general partnership or limited liability entity, authorizing such execution.

36.8. Waiver of Right to Jury Trial. Landlord and Tenant hereby waive their respective rights to a trial by jury of any claim, action, proceeding or counterclaim by either party against the other on any matters arising out of or in any way connected with this Lease, the relationship of Landlord and Tenant, and/or Tenant's Use or occupancy of the Premises, Building or Project (including any claim of injury or damage or the enforcement of any remedy under any current or future laws, statutes, regulations, codes or ordinances).

36.9. Counterparts. This Lease may be executed in multiple counterparts, all of which shall constitute one and the same Lease.

36.10. Execution of Lease; No Option. The submission of this Lease to Tenant shall be for examination purposes only and does not and shall not constitute a reservation of or option for Tenant to Lease, or otherwise create any interest of Tenant in the Premises or any other premises within the Building or Project. Execution of this Lease by Tenant and its return to Landlord shall not be binding on Landlord, notwithstanding any time interval, until Landlord has in fact signed and delivered this Lease to Tenant.

36.11. Furnishing of Financial Statements; Tenant's Representations. In order to induce Landlord to enter into this Lease, Tenant agrees that it shall promptly furnish Landlord, from time to time, upon Landlord's written request, with financial statements reflecting Tenant's current financial condition. Tenant represents and warrants that all financial statements, records and information furnished by Tenant to Landlord in connection with this Lease are true, correct and complete in all respects. Notwithstanding anything in this section of 36.11 to the contrary, Tenant shall only be required to provide financial statements to Landlord if (i) Tenant is in default under the Lease, or (ii) such financial statements are requested by a prospective lender or purchaser of the Project or Building.

36.12. Further Assurances. The parties agree to promptly sign all documents reasonably requested to give effect to the provisions of this Lease.

36.13. Prior Agreements; Amendments. This Lease and the schedules and addenda attached, if any, form a part of this Lease together with the rules and regulations set forth on Exhibit "E" attached hereto, and set forth all the covenants, promises, assurances, agreements, representations, conditions, warranties, statements, and understandings (Representations) between Landlord and Tenant concerning the Premises and the Building and Project, and there are no Representations, either oral or written, between them other than those in this Lease.

This Lease supersedes and revokes all previous negotiations, arrangements, letters of intent, offers to lease, lease proposals, brochures, representations, and information conveyed, whether oral or in writing, between the parties hereto or their respective representatives or any other person purporting to represent Landlord or Tenant. Tenant acknowledges that it has not been induced to enter into this Lease by any Representations not set forth in this Lease, and that it has not relied on any such Representations. Tenant further acknowledges that no such Representations shall be used in the interpretation or construction of this Lease, and that Landlord shall have no liability for any consequences arising as a result of any such Representations.

Except as otherwise provided herein, no subsequent alteration, amendment,

change, or addition to this Lease shall be binding upon Landlord or Tenant unless it is in writing and signed by each party.

36.14. Recording. Tenant shall not record this Lease without the prior written consent of Landlord. Tenant, upon the request of Landlord, shall execute and acknowledge a short form memorandum of this Lease for recording purposes.

36.15. Severability. A final determination by a court of competent jurisdiction that any provision of this Lease is invalid shall not affect the validity of any other provision, and any provision so determined to be invalid shall, to the extent possible, be construed to accomplish its intended effect.

36.16. Successors and Assigns. This Lease shall apply to and bind the heirs, personal representatives, and successors and assigns of the parties.

36.17. Time of the Essence. Time is of the essence of this Lease.

IN WITNESS WHEREOF, the parties hereto have executed this Lease as of the date first set forth on Page 1.

LANDLORD:

GLENBOROUGH FUND V, LIMITED PARTNERSHIP,
a Delaware limited partnership

By: GRTV, Inc.,
a Delaware corporation
Its General Partner

By: _____
Its _____

TENANT:

Sonus Networks, Inc.
a Delaware Corp.

By: /s/ Harris Fishman

Its Chief Financial Officer

By: /s/ [Illegible]

Its _____

ADDENDUM TO LEASE BETWEEN
GLENBOROUGH FUND V, LIMITED PARTNERSHIP,
a Delaware limited partnership ("Landlord"), and
SONUS NETWORKS, INC.,
a Delaware corporation ("Tenant")

DATED January 21, 1999

37. TENANT IMPROVEMENTS

Section 37. adds to and amends the Lease as follows:

a. Landlord shall construct Tenant Improvements to the Premises in accordance with Exhibit D attached hereto and made a part hereof.

b. Landlord shall contribute a total maximum amount of $83,080.00 ("Tenant Improvement Allowance") toward the cost of constructing such Tenant Improvements. Landlord shall pay the Tenant Improvement Allowance directly to any contractors and/or subcontractors performing the Tenant Improvements in the Premises on behalf of Landlord.

c. If the actual cost of completing the Tenant Improvements is less than the Tenant Improvement Allowance, then Landlord shall retain the difference and no credit shall be due Tenant. Notwithstanding the foregoing, however, Tenant shall have until December 31, 1999 to request payment of all or part of the Tenant Improvement Allowance.

d. If the cost of completing the Tenant Improvements exceeds the Tenant Improvement Allowance, any such excess shall be Tenant's responsibility and Tenant shall reimburse Landlord (as "Additional Rent") within twenty (20) days after Tenant's receipt of Landlord's invoice.

e. Notwithstanding anything herein to the contrary, Landlord and Tenant may agree in the future that Tenant shall construct all or a portion of the Tenant Improvements set forth in Exhibit D. In such event, Landlord shall pay the portion of the Tenant Improvement Allowance attributable to such Tenant Improvements constructed by Tenant directly to Tenant. Such payment will be made by Landlord within (30) days of Landlord's receipt of paid receipts for such work, together with final lien releases therefor.

38. RIGHT OF FIRST OFFER

Section 38. adds to and amends the Lease as follows:

During the initial Term of the Lease, Landlord hereby grants to Tenant the right to receive Landlord's first offer to lease any available space on the first (1st) floor of 5 Carlisle Road or in the entire building located at 3 Carlisle Road. The term "available space" means all such space, the lease term (including renewal options) of which expires, and all such space vacated by any tenant. As to any such available space, Landlord shall promptly deliver to Tenant Notice of availability and an offer to Tenant to lease the space as part of the Premises coterminously with the Term of this Lease at the then current market rental rate (subject to adjustment in accordance with the terms of the Lease). Other significant terms and conditions shall be included in the notice. Within fifteen (15) days after receipt of Landlord's Notice, Tenant shall provide Landlord Notice of its acceptance or rejection of the offer. If Tenant indicates by Notice to Landlord of its agreement to lease the available space, the parties shall immediately execute an amendment to this Lease stating the addition of the space to the Premises. If Tenant does not accept the offer within the allotted time, Tenant shall be deemed to have rejected the offer. With respect to any rejection by Tenant, the right to receive an offer to lease shall be of no further force or effect as to the space in question, provided that Landlord then proceeds within six (6) months of Landlord's Notice to Tenant to lease such available space to a third party on substantially similar terms as offered to Tenant [ILLEGIBLE]

This Right of First Offer is granted by Landlord to Sonus Networks, Inc., a Delaware corporation (or to any entity which is duly assigned the Lease hereunder after having purchased all or substantially all of the capital stock of Tenant), and is personal as to such party(ies) and shall not be exercised or assigned, voluntarily or involuntarily, by or to anyone other than such party(ies). Any assignment of this Right of First Offer without Landlord's prior written consent shall be void and, at Landlord's election, shall be a default on the Lease.

39. PARKING

Section 39. adds to and amends Section 2.12. of the Lease as follows:

Notwithstanding anything in Section 2.12. of the Lease to the contrary, subject to Section 6.3. of the Lease, Landlord shall use reasonable efforts to increase the parking ratio of the Building to a minimum of four (4) parking spaces per thousand square feet of net rentable area of the Building. Such efforts may include, but shall not be limited to, (i) exploring expanding the Building parking by contacting the Town of Westford to seek authorization for additional parking, (ii) re-lining the existing parking spaces and/or negotiating with Sentry Insurance for a reduction in its current parking ratio. Any parking spaces which are not allocated to a particular tenant or tenants shall be made available on a first come, first served basis.

Landlord agrees to commence its efforts to obtain the above-referenced additional parking promptly upon the execution of this Lease, and to diligently pursue such efforts. Landlord shall be responsible for all costs and expenses incurred in attempting to obtain the additional parking (collectively, the "Parking Expenses"). The term "reasonable efforts" shall require Landlord to pay all necessary Parking Expenses, but in no event shall Landlord be required to spend in excess of $45,000.00 therefor. All Parking Expenses shall be included in Operating Expenses for calendar year 1999, regardless of when such expenses are incurred.

Upon obtaining additional parking, Tenant shall be entitled to the nonexclusive use of a total of up to 166 parking spaces located at the Project at no charge.

40. LANDLORD'S INDEMNIFICATION OBLIGATIONS

Section 40. adds to and amends Section 14.1. of the Lease as follows:

Notwithstanding anything in Section 14.1. of the lease to the contrary, and subject to any sections of the Lease specifically limiting Landlord's liability, Landlord shall indemnify and hold harmless Tenant from and against all losses, claims, costs, damage, liability or expenses, including but not limited to reasonable attorneys' fees, to the extent such losses, claims, costs, damage, liability or expenses arise out of the negligence or willful misconduct of Landlord, its agents, employees or contractors.

41. PERMITTED TRANSFERS

This Section 41. adds to and amends Section 18.1. of the Lease as follows:

Tenant shall be permitted to assign or sublet the Premises, or any portion thereof, without Landlord's consent, if such assignment or sublease is to any corporation or other entity which (i) is a parent or subsidiary of Tenant, (ii) controls, is controlled by, or is under common control with Tenant, (iii) is the product of a merger with Tenant (provided that such entity maintains a net worth at least equal to that of Tenant just prior to such merger), or (iv) is the purchaser of substantially all of Tenant's assets and/or capital stock, provided, however, that upon any such assignment or sublease, Tenant shall promptly provide notice to Landlord as to the name of the assignee or sublessee, as well as a copy of the document effectuating such assignment or sublet.

42. DAMAGE AND DESTRUCTION

This Section 42. adds to and amends Section 16.2. of the Lease as follows:

Notwithstanding anything in Section 16.2. of the Lease to the contrary, in the event that Landlord determines that repairs to the Premises or portion of the Building necessary for Tenant's occupancy cannot be completed under applicable laws and regulations within three hundred sixty (360) days of the date a permit for such construction is issued by the governing authority, then Tenant may elect, upon Notice to Landlord given within thirty (30) days after the date of such fire or other casualty, to terminate the Lease. Such termination shall be effective as of the date of damage or destruction.

IN WITNESS WHEREOF, the parties have executed this Addendum to Lease as of the date first above written.

LANDLORD:

GLENBOROUGH FUND V, Limited Partnership,
a Delaware limited partnership

By: GRTV, Inc.,
a Delaware corporation
Its General Partner

By:_____
Its_____

TENANT:

SONUS NETWORKS, INC.,
a Delaware corporation

By: /s/ Harris Fishman

Its Chief Financial Officer

By: /s/ [Illegible]

Its

EXHIBIT C
BUILDING STANDARD TENANT IMPROVEMENTS

1. Partitions

Ceiling height partitions consisting of 3 5/8" 20-gauge metal studs at 16" O.C. with 5/8" gypsum board each side, taped and sanded to receive paint. Maximum: One (1) lineal foot per 16 square feet of area.

2. Doors and Frames

Tenant entry door shall be solid core with lockset and door closer. Tenant is allowed one (1) entry door per suite up to 15,000 square feet of area, and an additional entry door is allowed for suites greater than 15,000 square feet.

Tenant is allowed one (1) interior passage door for every 300 square feet of area. All interior passage doors to be given standard latchset hardware, and shall be 1 3/4" solid core oak veneer door 7'0" x 3'0" with metal welded frame.

3. Ceiling

Suspended Building Standard 24" x 24" grid configuration with Armstrong 705 acoustical lay-in panels will be used throughout the premises.

4. Lighting

24" x 48" Building Standard four (4) tube 40 watt recessed fluorescent fixtures with lenses. One (1) fixture per 80 square feet of area.

Any alterations or additions to said existing Building Standard pattern required to accommodate Tenant Improvements shall be at Tenant's sole expense.

Elevator lobbies and common toilet facilities will have lighting selected by Landlord.

5. Light Switches

One (1) Building Standard single pole wall mounted light switch per 300 square feet of area.

6. Electrical Outlets

One (1) Building Standard 120V Duplex electrical wall mounted outlet for each 175 square feet of area. Each outlet is 120 volts and is circuited with similar outlets on a 20 amp circuit.

7. Lighted Exit Lights

Building Standard exit signs are provided in the Premises to meet any requirements by code.

8. Floor Covering and Base

Carpeting in elevator lobbies and common corridors on all multiple-tenancy office floors in color and type as selected by Landlord; carpeting within office space as required and selected by Tenant from Building Standard selection of 28oz. loop carpeting.

Maximum: Two Hundred(200) lineal feet of base per twelve hundred(1200) square feet of space.

9. Paint

All wall surfaces except doors finished with one (1) coat primer sealer and one (1) coat flat latex paint in colors to be selected by Tenant from Building Standard selection, with not more than one (1) color to be in premises.

10. Window Covering

Building Standard vertical blinds on all exterior windows. No deletions or substitutions allowed.

11. HVAC

A complete year-round HVAC system engineered to handle normal office usage, with ducted supply air through ceiling diffusers, zoned and located in existing Building Standard pattern. Return air through exhaust vents. Any alterations or additions to said system required to accommodate Tenant Improvements shall be at Tenant's sole expense and must be done by Landlord-Approved Contractor.

12. Tenant Signage

One (1) Building Standard tenant identification sign at Tenant's entry door and inclusion in building lobby directory.

[PLAN OMITTED]

Westford Corporate Center

Building One - 5 Carlisle Road
SECOND FLOOR PLAN

Exhibit B

[AREA PLAN OMITTED]

Exhibit D

Work Letter and Drawing

1. Demolish approx. 146 linear feet of drywall partitioning, including removal of five 3' x 7' doors.

2. Fix suspended acoustical ceiling where walls penetrated.

3. Remove carpet/tile and replace with ESD conductive tile, approx. 4300 square feet.

4. Construct approx. 80 linear feet of new drywall partitioning, to underside of acoustical ceiling. Cove base included.

5. Install approx. 128 square feet of clear, laminated glass in new wall. Approx. 4 panes, 4' high by 8' long.

6. Install five new 3' x 7' and one 6' x 7' double solid core doors with hollow metal frames and hardware.

7. Paint new walls, and existing walls affected by construction, as required.

8. Misc. mechanical: Adjust sprinkler heads to conform to new layout. Adjust supply and return diffusers and move thermostats for even distribution. Adjust general outlets, lighting fixtures and switches.

9. Install approx. 375 feet of cable tray, similar to what exists in the current Sonus lab areas.

10. Electrical: Install 40 quad 20 amp ceiling drops distributed over the 2500 sq. ft. production floor area, including required distribution panels, etc. Install 20 duplex outlets in new walls.

11. Security: Install card access control on one new door (at end of hallway leading to the freight elevator) and on the freight elevator at the first floor. We want it so that only Sonus employees can access the freight elevator from the first floor. When you step out of the freight elevator on the second floor you will be in the Sonus space (the shipping/receiving area).

12. Voice/data wiring for the area.

NOTES: (A) - IF ELEVATOR (C) TRAVEL FROM FLOOR 1 TO FLOOR 2 CAN BE CARD-ACCESS CONTROLLED BY SONUS (DESIRED), THEN DOOR (A) NEEDS TO BE ADDED WITH CARD ACCESS. IF NOT, DOUBLE DOORS (B) NEED TO BE ADDED.

(D) ALL WALLS TO BE DEMOLISHED [as indicated in Floor Plan].

(E) ADD WALLS - POSSIBLE GLASS WINDOWS TO LET LIGHT IN.

(F) DOOR(S) AS REQUIRED FOR FIRE CODE.

(G) FLOORS TO BE ESD TILE THRUOUT ENCLOSED [ILLEGIBLE] AREA

[FLOOR PLAN OMITTED]

EXHIBIT E

RULES AND REGULATIONS

1. The entrances, lobbies, passages, corridors, elevators, halls, courts, sidewalks, vestibules, and stairways shall not be encumbered or obstructed by Tenant, Tenant's agents, servants, employees, licensees or visitors or used by them for any purposes other than ingress or egress to and from the Premises.

2. The moving in or out of all safes, freight, furniture, or bulky matter of any description shall take place during the hours which Landlord may determine from time to time. Landlord reserves the right to inspect all freight and bulky matter to be brought into the Building and to exclude from the Building all freight and bulky matter which violates any of these Rules and Regulations or the Lease of which these Rules and Regulations are a part.

3. Tenant, or the employees, agents, servants, visitors or licensees of Tenant shall not at any time place, lease or discard any rubbish, paper, articles, or objects of any kind whatsoever outside the doors of the Premises or in the corridors or passageways of the Building. No animals or birds shall be brought or kept in or about the Building. Bicycles shall not be permitted in the Building.

4. Tenant shall not place objects against glass partitions or doors or windows or adjacent to any common space which would be unsightly from the Building corridors or from the exterior of the Building and will promptly remove the same upon notice from Landlord.

5. Tenant shall not make noises, cause disturbances, create vibrations, odors or noxious fumes or use or operate any electric or electrical devices or other devices that emit sound waves or are dangerous to other tenants and occupants of the Building or that would interfere with the operation of any device or equipment or radio or television broadcasting or reception from or within the Building or elsewhere, or with the operation of roads or highways in the vicinity of the Building, and shall not place or install any projections, antennae, aerials, or similar devices inside or outside of the Premises, without the prior written approval of Landlord.

6. Tenant shall not: (a) use the Premises for lodging, manufacturing or for any immoral or illegal purposes; (b) use

the Premises to engage in the manufacture or sale of, or permit the use of spirituous, fermented, intoxicating or alcoholic beverages on the Premises; (c) use the Premises to engage in the manufacture or sale of, or permit the use of, any illegal drugs on the Premises.

7. No awning or other projections shall be attached to the outside walls or windows. No curtains, blinds, shades, screens or signs other than those furnished by Landlord shall be attached to, hung in, or used in connection with any window or door of the Premises without prior written consent of Landlord.

8. No signs, advertisement, object, notice or other lettering shall be exhibited, inscribed, painted or affixed on any part of the outside or inside of the Premises if visible from outside of the Premises. Interior signs on doors shall be painted or affixed for Tenant by Landlord or by sign painters first approved by Landlord at the expense of Tenant and shall be of a size, color and style acceptable to Landlord.

9. Tenant shall not use the name of the Building or use pictures or illustrations of the Building in advertising or other publicity without prior written consent of Landlord. Landlord shall have the right to prohibit any advertising by Tenant which, in Landlord's reasonable opinion, tends to impair the reputation of the Building or its desirability for offices, and, upon written notice from Landlord, Tenant will refrain from or discontinue such advertising.

10. Door keys for doors in the Premises will be furnished at the Commencement of the Lease by Landlord. Tenant shall not affix additional locks on doors and shall purchase duplicate keys only from Landlord and will provide to Landlord, prior to termination, the means of opening of safes, cabinets, or vaults to be left on the Premises after termination. In the event of the loss of any keys so furnished by Landlord, Tenant shall pay to Landlord the cost thereof.

11. Tenant shall cooperate and participate in all security programs affecting the Building.

12. Tenant assumes full responsibility for protecting its space from theft, robbery and pilferage, which includes keeping doors locked and other means of entry to the Premises closed and secured.

13. Tenant shall not make any room-to-room canvass to solicit business from other tenants in the Building, and shall not exhibit, sell or offer to sell, use, rent or exchange any item or services in or from the Premises unless ordinarily embraced within Tenant's use of the Premises as specified in

its Lease. Canvassing, soliciting and peddling in the Building are prohibited and Tenant shall cooperate to prevent the same. Peddlers, solicitors and beggars shall be reported to the Management Office.

14. Tenant shall not waste electricity or water and agrees to cooperate fully with Landlord to assure the most effective operation of the Building's heating and air conditioning and shall refrain from attempting to adjust controls. Tenant shall keep corridor doors closed except when being used for access.

15. The water and wash closets and other plumbing fixtures shall not be used for any purposes other than those for which they were constructed, and no sweepings, rubbish, rags, or other substances shall be thrown therein.

16. Building employees shall not be required to perform, and shall not be requested by any tenant or occupant to perform, any work outside of their regular duties, unless under specific instructions from the office of the Managing Agent of the Building.

17. Tenant may request heating and/or air conditioning during other periods in addition to normal working hours by submitting its request in writing to the office of the Managing Agent of the Building no later than 2:00 p.m. the preceding work day (Monday through Friday). The request shall clearly state the start and stop hours of the "off-hour" service. Tenant shall submit to the Building Manager a list of personnel authorized to make such request. When applicable, Tenant shall be charged for such operation in the form of additional rent.

18. Tenant covenants and agrees that its use of the Premises shall not cause a discharge of sanitary (non-industrial) sewage which will result in a violation of the sewage discharge permit(s) for the Building. Discharges in excess of that amount, and any discharge of industrial sewage, shall only be permitted if Tenant, at its sole expense, shall have obtained all necessary permits and licenses therefor, including without limitation permits from state and local authorities having jurisdiction thereof. Tenant shall submit to Landlord on December 31 of each year of the Term of this Lease a statement, certified by an authorized officer of Tenant, which contains the following information: name of all chemicals, gases, and hazardous substances, used, generated, or stored on the Premises; type of substance (liquid, gas or granular); quantity used, stored or generated per year; method of disposal; permit number, if any, attributable to each substance, together with copies of all permits for such substance; and permit expiration date for each substance.

Exhibit 10.4

SERIES A PREFERRED STOCK PURCHASE AGREEMENT

This Agreement dated as of November 18, 1997 is entered into by and among Sonus Networks, Inc., a Delaware corporation (the "Company"), Rubin Gruber, Michael G. Hluchyj and Kwok P. Wong (individually, a "Founder" and, collectively, the "Founders"), and the persons and entities listed on Schedule I attached hereto (individually, a "Purchaser" and, collectively, the "Purchasers")

In consideration of the mutual promises and covenants contained in this Agreement, the parties hereto agree as follows:

1. Authorization and Sale of Shares.

1.1 Authorization. The Company has duly authorized the sale and issuance, pursuant to the terms of this Agreement, of 7,100,000 shares of its Series A Preferred Stock, $0.01 par value per share (the "Series A Preferred Stock"), having the rights, restrictions, privileges and preferences set forth in the Certificate of Designations attached hereto as Exhibit A (the "Certificate of Designations"). The Company has adopted and filed the Certificate of Designations with the Secretary of State of the State of Delaware.

1.2 Sale of Shares. Subject to the terms and conditions of this Agreement the Company will issue and sell to each Purchaser, and each Purchaser will purchase, for a purchase price of $1.00 per share, such number of shares of Series A Preferred Stock as is set forth opposite such Purchaser's name on Schedule I attached hereto. The shares of Series A Preferred Stock being sold under this Agreement are referred to as the "Shares." The Company's agreement with each of the Purchasers is a separate agreement, and the sale of Shares to each of the Purchasers is a separate sale.

1.3 Use of Proceeds. The Company will use the proceeds from the sale of the Shares for working capital purposes.

2. The Closing. The closing (the "Closing") of the sale and purchase of the Shares under this Agreement shall take place at the offices of Hale and Dorr LLP, 60 State Street, Boston, Massachusetts at 9:00 a.m. on the date of this Agreement, or at such, other time, date and place as are mutually agreeable to the Company and the Purchasers. The date of the Closing is hereinafter referred to as the "Closing Date." At the Closing:

(a) the Company shall deliver to the Purchasers a certificate, as of the most recent practicable date, as to the corporate good standing of the Company issued by the Secretary of State of the State of Delaware;

(b) the Company shall deliver to the Purchasers the Certificate of Incorporation of the Company, as amended and in effect as of the Closing Date (including the Certificate of Designations), certified by the Secretary of State of the State of Delaware;

(c) the Company shall deliver to the Purchasers a Certificate of the Secretary of the Company attesting as to (i) the By-laws of the Company, and (ii) resolutions of the Board of Directors of the Company authorizing and approving all matters in connection with this Agreement and the transactions contemplated hereby;

(d) Bingham Dana LLP, counsel for the Company, shall deliver to the Purchasers an opinion, dated the Closing Date, in the form attached hereto as Exhibit B;

(e) the Company, the Founders and the Purchasers shall execute and deliver the Investor Rights Agreement in the form attached hereto as Exhibit C (the "Investor Agreement");

(f) the Company; the Founders and the Purchasers shall execute and deliver the Right of First Refusal and Co-Sale Agreement in the form attached hereto as Exhibit D (the "Right of First Refusal Agreement");

(g) the Company shall deliver to each Purchaser a certificate for the number of Shares being purchased by such Purchaser, registered in the name of such Purchaser;

(h) each Purchaser shall pay to the Company the purchase price for the Shares being purchased by such Purchaser, by wire transfer or certified check; and

(i) the Company and the Purchasers shall execute and deliver a Cross-Receipt.

3. Representations of the Company. Subject to and except as disclosed by the Company in the Disclosure Schedule attached hereto (the "Disclosure Schedule"), the Company hereby represents and warrants to the Purchasers as follows:

3.1 Organization and Standing. The Company is a corporation duly organized, validly existing and in good standing under the laws of the State of Delaware and has full corporate power and authority to conduct its business as presently conducted and as proposed to be conducted by it and to enter into and perform this Agreement and to carry out the transactions contemplated by this Agreement. The Company is duly qualified to do business as a foreign corporation

and is in good standing in the Commonwealth of Massachusetts and in any other jurisdiction in which the failure to so qualify would have a material adverse effect on the operations or financial condition of the Company. The Company has furnished to special counsel to the Purchasers true and complete copies of its Certificate of Incorporation and By-laws, each as amended to date and presently in effect.

3.2 Capitalization. The authorized capital stock of the Company (immediately prior to the Closing) consists of (i) 15,000,000 shares of common stock, $0.001 par value per share (the "Common Stock"), of which 3,282,093 shares are issued and outstanding, 2,467,907 shares have been reserved for issuance pursuant to the Company's 1997 Stock Incentive Plan and 7,100,000 shares have been reserved for issuance upon the conversion of the Shares, and (b) 10,000,000 shares of preferred stock, $0.01 par value per share (of which 7,100,000 shares have been designated as Series A Preferred Stock), none of which are issued or outstanding. At the Closing, the Common Stock and the Series A Preferred Stock will have the voting powers, designations, preferences, rights and qualifications, and limitations or restrictions set forth in the Certificate of Incorporation, as amended by the Certificate of Designations. All of the issued and outstanding shares of Common Stock have been duly authorized and validly issued and are fully paid and nonassessable. Except as contemplated by this Agreement, (i) no subscription, warrant, option, convertible security or other right (contingent or otherwise) to purchase or acquire any shares of capital stock of the Company is authorized or outstanding, (ii) the Company has no obligation (contingent or otherwise) to issue any subscription, warrant, option, convertible security or other such right or to issue or distribute to holders of any shares of its capital stock any evidences of indebtedness or assets of the Company, and (iii) the Company has no obligation (contingent or otherwise) to purchase, redeem or otherwise acquire any shares of its capital stock or any interest therein or to pay any dividend or make any other distribution in respect thereof. All of the issued and outstanding shares of capital stock of the Company have been offered, issued and sold by the Company in compliance with applicable Federal and state securities laws.

3.3 Subsidiaries, Etc. The Company has no subsidiaries and does not own or control, directly or indirectly, any shares of capital stock of any other corporation or any interest in any partnership, joint venture or other non-corporate business enterprise.

3.4 Stockholder List and Agreements. Section 3.4 of the Disclosure Schedule sets forth a true and complete list of the stockholders of the Company, showing the number of shares of Common Stock or other securities of the Company held by each stockholder immediately prior to the execution of this Agreement and the consideration paid to the Company therefor. Except as listed in Section 3.4 of the Disclosure Schedule or as contemplated by this Agreement, there are no agreements, written or oral, between the Company and any holder of its capital stock, or, to the

best of the Company's knowledge, among any holders of its capital stock, relating to the acquisition (including without limitation rights of first refusal or pre-emptive rights), disposition, registration under the Securities Act of 1933, as amended (the "Securities Act"), or voting of the capital stock of the Company.

3.5 Issuance of Shares. The issuance, sale and delivery of the Shares in accordance with this Agreement, and the issuance and delivery of the shares of Common Stock issuable upon conversion of the Shares, have been duly authorized by all necessary corporate action on the part of the Company, and all such shares have been duly reserved for issuance. The Shares when so issued, sold and delivered against payment therefor in accordance with the provisions of this Agreement, and the shares of Common Stock issuable upon conversion of the Shares, when issued upon such conversion, will be duly and validly issued, fully paid and non-assessable.

3.6 Authority for Agreement. The execution, delivery and performance by the Company of this Agreement and all other agreements required to be executed by the Company at the Closing pursuant to Section 2 (the "Ancillary Agreements"), and the consummation by the Company of the transactions contemplated hereby and thereby, have been duly authorized by all necessary corporate action. This Agreement and the Ancillary Agreements have been duly executed and delivered by the Company and constitute valid and binding obligations of the Company enforceable in accordance with their respective terms. The execution of and performance of the transactions contemplated by this Agreement and the Ancillary Agreements and compliance with their provisions by the Company will not violate any provision of applicable law and will not conflict with or result in any breach of any of the terms, conditions or provisions of, or constitute a default under, or require a consent or waiver under, its Certificate of Incorporation or By-laws (each as amended to date) or any material indenture, lease, agreement or other instrument to which the Company is a party or by which it or any of its properties is bound, or any decree, judgment, order, statute, rule or regulation applicable to the Company which would have a material adverse effect on the business, properties or results of operations of the Company (a "Material Adverse Effect").

3.7 Governmental Consents. No consent, approval, order or authorization of, or registration, qualification, designation, declaration or filing with, any governmental authority is required on the part of the Company in connection with the execution and delivery of this Agreement, the offer, issuance, sale and delivery of the Shares, or the other transactions to be consummated at the Closing, as contemplated by this Agreement, except such filings as shall have been made prior to and shall be effective on and as of the Closing. Based on the representations made by the Purchasers in Section 5 of this Agreement, the offer and sale of the Shares to the Purchasers will be exempt from the registration requirements of applicable Federal and state securities laws.

3.8 Litigation. Except as set forth in the Disclosure Schedule, there is no action, suit or proceeding, or governmental inquiry or investigation, pending, or, to the best of the Company's knowledge, any basis therefor or threat thereof, against the Company or any of the Founders, which questions the validity of this Agreement or the right of the Company or the Founders to enter into it, or which might result, either individually or in the aggregate, in any material adverse change in the business, assets or condition, financial or otherwise, of the Company, nor is there any litigation pending, or, to the best of the Company's knowledge, any basis therefor or threat thereof, against the Company or the Founders by reason of the past employment relationships of the Founders, the proposed activities of the Company, or negotiations by the Company and/or the Founders with possible investors in the Company.

3.9 Financial Statements. The Company has not prepared and does not otherwise have available any financial statements.

3.10 Absence of Liabilities. Except as set forth in Section 3.10 of the Disclosure Schedule, the Company does not have any liabilities of any type, whether absolute or contingent, which in the aggregate exceed $1,000.

3.11 Taxes. The Company has not been obligated to file any Federal, state, county, local and foreign tax returns. Neither the Company nor any of its stockholders has ever filed (a) an election pursuant to Section 1362 of the Internal Revenue Code of 1986, as amended (the "Code"), that the Company be taxed as an S Corporation, or (b) consent pursuant to Section 341(f) of the Code relating to collapsible corporations.

3.12 Property and Assets. The Company does not own any material properties or assets.

3.13 Intellectual Property.

(a) To the best of the Company's knowledge, no third party has claimed or has reason to claim that any person employed by or affiliated with the Company, in connection with his or her employment by or affiliation with the Company, (i) has violated or is violating any of the terms or conditions of his employment, non-competition or non-disclosure agreement with such third party, (ii) has disclosed or is disclosing or has utilized or is utilizing any trade secret or proprietary information or documentation of such third party or (iii) has interfered or is interfering in the employment relationship between such third party and any of its present or former employees. No third party has requested information from the Company which suggests that such a claim might be contemplated. To the best of the Company's knowledge, no person employed by or affiliated with the Company has employed or proposes to employ any trade secret or any information or

documentation proprietary to any former employer, and to the best of the Company's knowledge, no person employed by or affiliated with the Company has violated any confidential relationship which such person may have had with any third party, in connection with the development, manufacture or sale or any product or proposed product or the development or sale of any service or proposed service of the Company, and the Company has no reason to believe there will be any such employment or violation. To the best of the Company's knowledge, none of the execution or delivery of this Agreement, or the carrying on of business of the Company as officers, employees or agents by any officer, director or key employee of the Company, or the conduct or proposed conduct of the business of the Company, will conflict with or result in a breach of the terms, conditions or provisions of or constitute a default under any contract, covenant or instrument under which any such person is obligated which would have a Material Adverse Effect.

(b) Set forth in Section 3.13 of the Disclosure Schedule is a list of all domestic and foreign patents, patent rights, patent applications, trademarks, trademark applications, service marks, service mark applications, trade names and copyrights, and all applications for such which are currently in the process of being prepared, owned by or registered in the name of the Company, or of which the Company is a licensor or licensee or in which the Company has any right, and in each case a brief description of the nature of such right. Except as set forth in Section 3.13(b) of the Disclosure Schedule, the Company owns or possesses adequate licenses or other rights to use all patents, patent applications, trademarks, trademark applications, service marks, service mark applications, trade names, copyrights, manufacturing processes, formulae, trade secrets, customer lists and know-how (collectively, "Intellectual Property") necessary for the conduct of its business as conducted and as proposed to be conducted. Except as otherwise provided in the Disclosure Schedule, no claim is pending or, to the best of the Company's knowledge, threatened to the effect that the operations of the Company infringe upon or conflict with the asserted rights of any other person under any Intellectual Property, and, to the best of the Company's knowledge, there is no basis for any such claim (whether or not pending or threatened). No claim is pending or, to the knowledge of the Company, threatened to the effect that any such Intellectual Property owned or licensed by the Company, or which the Company otherwise has the right to use, is invalid or unenforceable by the Company, and, to the best of the Company's knowledge, there is no basis for any such claim (whether or not pending or threatened). To the best of the Company's knowledge, all technical information developed by and belonging to the Company which has not been patented has been kept confidential. The Company has not granted or assigned to any other person or entity any right to manufacture, have manufactured, assemble or sell the products or proposed products or to provide the services or proposed services of the Company.

3.14 Material Contracts and Obligations. Except as contemplated by this Agreement or as listed in Section 3.14 of the Disclosure Schedule, the Company

is not a party to any material agreement or commitment of any nature, including without limitation (a) any agreement which requires future expenditures by the Company in excess of $20,000, (b) any employment or consulting agreement, employee benefit, bonus, pension, profit-sharing, stock option, stock purchase or similar plan or arrangement, or distributor or sales representative agreement, (c) any agreement with any stockholder, officer or director of the Company, or any "affiliate" or "associate" of such persons (as such terms are defined in the rules and regulations promulgated under the Securities Act), including without limitation any agreement or other arrangement providing for the furnishing of services by, rental of real or personal property from, or otherwise requiring payments to, any such person or entity or (d) any agreement relating to the intellectual property rights of the Company.

3.15 Compliance. The Company has, to its knowledge, in all material respects, complied with all laws, regulations and orders applicable to its present and proposed business and has all material permits and governmental licenses required thereby. There is no term or provision of any mortgage, indenture, contract, agreement or instrument to which the Company is a party or by which it is bound, or, to the best of the Company's knowledge, of any provision of any state or Federal judgment, decree, order, statute, rule or regulation applicable to or binding upon the Company, which materially adversely affects or, so far as the Company may now foresee, in the future is reasonably likely to materially adversely affect, the business, assets or condition, financial or otherwise, of the Company. To the best of the Company's knowledge, neither the Founders nor any other employee of the Company is in violation of any term of any contract or covenant (either with the Company or with another entity) relating to employment, patents, proprietary information disclosure, non-competition or non-solicitation.

3.16 Employees and Founders.

(a) The Founders and the other holders of Common Stock have executed and delivered to the Company a Stock Repurchase Agreement in substantially the form attached hereto as Exhibit E and Exhibit F, respectively, and all of such agreements are in full force and effect.

(b) Each employee of the Company (including the Founders) has executed and delivered to the Company a Noncompetition and Confidentiality Agreement covering a period of one year following the termination of such employee's employment with the Company, in substantially the form attached hereto as Exhibit G, and all of such agreements are in full force and effect.

(c) None of the employees of the Company is represented by any labor union, and there is no labor strike or other labor trouble pending with

respect to the Company (including, without limitation, any organizational drive) or, to the best of the Company's knowledge, threatened.

3.17 ERISA. The Company does not have or otherwise contribute to or participate in any employee benefit plan subject to the Employee Retirement Income Security Act of 1974.

3.18 Books and Records. The minute books of the Company contain complete and accurate records of all meetings and other corporate actions of its stockholders and its Board of Directors and committees thereof. The stock ledger of the Company is complete and reflects all issuances, transfers, repurchases and cancellations of shares of capital stock of the Company.

3.19 Board of Directors. Effective upon the Closing, the Board of Directors shall be comprised of up to five members, and consist of (a) the Chief Executive Officer of the Company, (b) one additional designee of the Company, (c) one director designated by North Bridge Venture Partners, (d) one director designed by Matrix Partners, and (e) one outside Director designated by mutual agreement of the other four directors.

3.20 U.S. Real Property Holding Corporation. The Company is not now and has never been a "United States Real Property Holding Corporation" as defined in Section 897(c)(2) of the Code and Section 1.897-2(b) of the Regulations promulgated by the Internal Revenue Service.

3.21 Disclosures. Neither this Agreement nor any Schedule or Exhibit hereto, nor any certificate or instrument furnished to the Purchasers at the Closing or as required by the terms of this Agreement, when read together, contains or will contain any untrue statement of a material fact or omits or will omit to state a material fact necessary in order to make the statements contained herein or therein, in light of the circumstances under which they were made, not misleading.

4. Representations of Founders. Each Founder represents and warrants to the Purchasers as follows:

4.1 Conflicting Agreements. Except as set forth in the Disclosure Schedule, such Founder is not, as a result of the nature of the business conducted or proposed to be conducted by the Company, in violation of (i) any fiduciary or confidential relationship, (ii) any term of any contract or covenant (either with the Company or with another entity) relating to employment, patents, proprietary information disclosure, non-competition or non-solicitation, or (iii) any other contract or agreement, or any judgment, decree or order of any court or administrative agency relating to or affecting the right of such Founder to be employed by the Company, which violation would have a Material Adverse Effect.

4.2 Litigation. Except as set forth in the Disclosure Schedule, there is no action, suit or proceeding, or governmental inquiry or investigation, pending or, to the knowledge of such Founder, threatened against such Founder.

4.3 Stockholder Agreements. Except as contemplated by or disclosed in this Agreement, such Founder is not a party to any agreements, written or oral, relating to the acquisition, disposition, registration under the Securities Act, or voting of the capital stock of the Company.

4.4 Representations. To the best knowledge of such Founder, the Representations of the Company in Sections 3.8 (Litigation) and 3.13 (Intellectual Property) are true and correct.

4.5 Disclosure. To the knowledge of such Founder, neither this Agreement nor any Schedule or Exhibit hereto, nor any certificate or instrument furnished to the Purchasers at the Closing or as required by the terms of this Agreement, when read together, contains or will contain any untrue statement of a material fact or omits or will omit to state a material fact necessary in order to make the statements contained herein or therein, in light of the circumstances under which they were made, not misleading.

5. Representations of the Purchasers. Each Purchaser represents and warrants to the Company as follows:

5.1 Investment. Such Purchaser is acquiring the Shares, and the shares of Common Stock into which the Shares may be converted, for its or his own account for investment and not with a view to, or for sale in connection with, any distribution thereof, nor with any present intention of distributing or selling the same; and such Purchaser has no present or contemplated agreement, undertaking, arrangement, obligation, indebtedness or commitment providing for the disposition thereof. Such Purchaser acknowledges that the Shares are restricted securities as defined under the Securities Act and shall bear the legends set forth in Section 7.3 hereof.

5.2 Authority. Such Purchaser has full power and authority to enter into and to perform this Agreement in accordance with its terms. Such Purchaser represents that it has not been organized, reorganized or recapitalized specifically for the purpose of investing in the Company. This Agreement and the Ancillary Agreement to be executed by such Purchaser have been duly executed and delivered by such Purchaser and constitute valid and binding obligations of such Purchaser enforceable in accordance with their respective terms. The execution of and performance of the transactions contemplated by this Agreement and the Ancillary Agreements to be executed by such Purchaser and compliance with their provisions by such Purchaser will not violate any provision of law and will not conflict with or

result in any breach of any of the terms, conditions or provisions of, or constitute a default under, or require a consent or waiver under, its organizational documents (each as amended to date) or any indenture, lease, agreement or other instrument to which the Purchaser is a party or by which it or any of its properties is bound, or any decree, judgment, order, statute, rule or regulation applicable to such Purchaser.

5.3 Experience. Such Purchaser has carefully reviewed the representations concerning the Company contained in this Agreement and has made detailed inquiry concerning the Company, its business and its personnel; the officers of the Company have made available to such Purchaser any and all written information which it has requested and have answered to such Purchaser's satisfaction all inquiries made by such Purchaser; and such Purchaser has sufficient knowledge and experience in investing in companies similar to the Company so as to be able to evaluate the risks and merits of its investment in the Company and is able financially to bear the risks thereof, including a complete loss of its investment. Such Purchaser understands that an investment in the Company involves a high degree of risk in view of the fact that the Company is a start-up enterprise with no operating history, and there may never be an established market for the Company's capital stock.

5.4 Status. Such Purchaser is an "accredited Investor" as that term is defined in Rule 501 of Regulation D promulgated under the Securities Act.

6. Covenants of the Company.

6.1 Inspection. The Company shall permit each Purchaser, or any authorized representative thereof, to visit and inspect the properties of the Company, including its corporate and financial records, and to discuss its business and finances with officers of the Company, during normal business hours following reasonable notice and as often as may be reasonably requested, without interruption of the business of the Company and subject to the confidentiality obligations of Section 8.2 hereof.

6.2 Financial Statements and Other Information.

(a) So long as a Purchaser (or any of its affiliates) holds at least 355,000 shares of Series A Preferred Stock, the Company shall deliver to such Purchaser:

(i) within 90 days after the end of each fiscal year of the Company, an audited balance sheet of the Company as at the end of such year, and audited statements of income and of cash flows of the Company for such year, certified by certified public accountants of established national reputation selected by

the Company, and prepared in accordance with generally accepted accounting principles; and

(ii) within 45 days after the end of each fiscal quarter of the Company, an unaudited balance sheet of the Company as at the end of such quarter, and unaudited statements of income and of cash flows of the Company for such fiscal quarter and for the current fiscal year to the end of such fiscal quarter.

(b) So long as a Purchaser (or any of its affiliates) holds at least 355,000 shares of Series A Preferred Stock (as adjusted for stock splits, stock dividends, recapitalizations and similar events), the Company shall deliver to such Purchaser:

(i) within 30 days after the end of each month, an unaudited balance sheet of the Company as at the end of such month and unaudited statements of income and of cash flows of the Company for such month and for the current fiscal year to the end of such month, setting forth in comparative form the Company's projected financial statements for the corresponding periods for the current fiscal year;

(ii) as soon as available, but in any event within 30 days after commencement of each new fiscal year, a budget, consisting of a business plan and projected financial statements for such fiscal year; and

(iii) with reasonable promptness, such other notices, information and data with respect to the Company as the Company delivers to the holders of its Common Stock, and such other information and data as such Purchaser may from time to time reasonably request.

(c) The foregoing financial statements shall be prepared on a consolidated basis if the Company then has any subsidiaries. The financial statements delivered pursuant to clause (ii) of paragraph (a) and clause (i) of paragraph (b) shall be accompanied by a certificate of the chief financial officer of the Company stating that such statements have been prepared in accordance with generally accepted accounting principles consistently applied (except as noted) and fairly present the financial condition and results of operations of the Company at the date thereof and for the periods covered thereby.

6.3 Material Changes and Litigation. The Company shall promptly notify the Purchasers of any material adverse change in the business, assets or condition, financial or otherwise, of the Company and of any litigation or governmental proceeding or investigation brought or, to the best of the Company's knowledge, threatened against the Company, or against the Founders or an officer, director, key employee or principal stockholder of the Company materially adversely

affecting or which, if adversely determined, would materially adversely affect its business, prospects, assets or condition, financial or otherwise.

6.4 Insurance.

(a) The Company shall procure, within a reasonable period of time following the Closing, and shall maintain for a period of at least three years, term life insurance upon the lives of each of the Founders, in the amount of $1,000,000, with the proceeds payable to the Company.

(b) The Company shall procure, promptly following the Closing, and shall maintain in effect, policies of workers' compensation insurance and of insurance with respect to its properties and business of the kinds and in the amounts not less than is customarily obtained by corporations engaged in the same or similar business and similarly situated, including, without limitation, insurance against loss, damage, fire, theft, public liability and other risks.

6.5 Employee Agreements. The Company shall require all employees hereafter employed or engaged by the Company who are at or above the director level or other key employees to enter into a Noncompetition and Confidentiality Agreement covering a period of one year following the termination of such employee's employment with the Company, substantially in the form attached hereto as Exhibit G or in such other form as may be approved by the Board of Directors. The Company shall require all employees not covered by the foregoing sentence to enter into a Confidentiality Agreement substantially in the form attached hereto as Exhibit H or in such other form as may be approved by the Board of Directors.

6.6 Related Party Transactions. The Company shall not enter into any agreement with any stockholder, officer or director of the Company, or any "affiliate" or "associate" of such persons (as such terms are defined in the rules and regulations promulgated under the Securities Act), including without limitation any agreement or other arrangement providing for the furnishing of services by, rental of real or personal property from, or otherwise requiring payments to, any such person or entity, without the consent of at least a majority of the members of the Company's Board of Directors having no interest in such agreement or arrangement.

6.7 Directors.

(a) The Company shall use reasonable efforts to cause the election to the Board of Directors, as soon as practicable following the Closing, of one independent director mutually agreeable to the other directors, as set forth in Section 3.19.

(b) The Company shall promptly reimburse in full each director of the Company who is not an employee of the Company and who was elected as a director solely by the holders of the Series A Preferred Stock for all of his reasonable out-of-pocket expenses incurred in attending each meeting of the Board of Directors of the Company or any committee thereof.

6.8 Option Shares and Restricted Stock. The Company has reserved an aggregate of 2,467,907 shares of Common Stock for issuance to employees and consultants of the Company pursuant to the 1997 Stock Incentive Plan of the Company.

(a) Unless otherwise agreed by the Board of Directors, all options granted under the 1997 Stock Incentive Plan shall become exercisable at the rate of 20% on the first anniversary of grant and 1.6667% per month thereafter over the subsequent four years so long as the optionee continues to be an employee or consultant of the Company, subject to acceleration by one year of the unvested portion of such options in the event of (i) as to all optionees, an Acquisition Event (as defined in the standard form of stock option agreements for the grant of options under such Plan), and (ii) in the case of the Founders only, also in the event of the death or disability of a Founder.

(b) Restricted stock awards under the 1997 Stock Option Plan shall be issued pursuant to a Stock Repurchase Agreement in the form of Exhibit F attached hereto, or such other form as may be approved by the Board of Directors of the Company.

6.9 Reservation of Common Stock. The Company shall reserve and maintain a sufficient number of shares of Common Stock for issuance upon conversion of all of the outstanding Shares.

6.10 Termination of Covenants. The covenants of the Company contained in Sections 6.1 through 6.9 shall terminate, and be of no further force or effect, upon the closing of the Company's first offering of Common Stock, resulting in net proceeds to the Company of at least $10,000,000, and at a price per share of at least $5.00 (as adjusted for stock splits, stock dividends, recapitalizations and similar events) or, at such time as the Purchasers (together with any affiliated entities to whom Shares have been transferred) own less than an aggregate of 1,775,000 shares of Series A Preferred Stock (as adjusted for stock splits, stock dividends, recapitalizations and similar events), unless the Company has, prior to such time, failed to redeem shares of Series A Preferred Stock when such redemption was due in accordance with Section 6 of Article III of the Company's Certificate of Incorporation, which failure continues.

6.11 Qualified Small Business Stock. The Company shall submit to its stockholders (including the Purchasers) and to the Internal Revenue Service any reports that may be required under Section 1202(d)(1)(C) of the Code and the Regulations promulgated thereunder. In addition, within ten days after a Purchaser's written request therefor, the Company shall deliver to such Purchaser a written statement indicating whether such Purchaser's interest in the Company constitutes "qualified small business stock" as defined in Section 1202(c) of the Code.

7. Transfer of Shares.

7.1 Restricted Shares. "Restricted Shares" means (i) the Shares, (ii) the shares of Common Stock issued or issuable upon conversion of the Shares, (iii) any shares of capital stock of the Company acquired by a Purchaser pursuant to the Investor Agreement or the Right of First Refusal Agreement, and (iv) any other shares of capital stock of the Company issued in respect of such shares (as a result of stock splits, stock dividends, reclassifications, recapitalizations, or similar events); provided, however, that shares of Common Stock which are Restricted Shares shall cease to be Restricted Shares (i) upon any sale pursuant to a registration statement under the Securities Act, or under Section 4(1) of the Securities Act or Rule 144 under the Securities Act, or (ii) at such time as they become eligible for sale under Rule 144(k) under the Securities Act.

7.2 Requirements for Transfer.

(a) Restricted Shares shall not be sold or transferred unless (1) either (i) they first shall have been registered under the Securities Act, or (ii) the Company first shall have been furnished with an opinion of legal counsel, reasonably satisfactory to the Company, to the effect that such sale or transfer is exempt from the registration requirements of the Securities Act and (2) such actions are in compliance with applicable state securities laws.

(b) Notwithstanding the foregoing, no registration or opinion of counsel shall be required for (i) a transfer by a Purchaser which is a partnership to a partner of such partnership or a retired partner of such partnership who retires after the date hereof, or to the estate of any such partner or retired partner, if the transferee agrees in writing to be subject to the terms of this Section 7 to the same extent as if he were an original Purchaser hereunder, or (ii) a transfer made in accordance with Rule 144 under the Securities Act.

7.3 Legend. Each certificate representing Restricted Shares shall bear a legend substantially in the following form:

"The shares represented by this certificate have not been registered under the Securities Act of 1933, as amended, and may not be offered, sold or otherwise

transferred, pledged or hypothecated unless and until such shares are registered under such Act or an opinion of counsel satisfactory to the Company is obtained to the effect that such registration is not required."

The foregoing legend shall be removed from the certificates representing any Restricted Shares, at the request of the holder thereof, at such time as they become eligible for resale pursuant to Rule 144(k) under the Securities Act.

7.4 Rule 144A Information. The Company shall, at all times during which it is neither subject to the reporting requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), nor exempt from reporting pursuant to Rule 12g3-2(b) under the Exchange Act, upon the written request of a Purchaser, provide in writing to such Purchaser, and to any prospective transferee of any Restricted Shares of such Purchaser, the information concerning the Company described in Rule 144A(d)(4) under the Securities Act ("Rule 144A Information"). The Company also shall, upon the written request of a Purchaser, cooperate with and assist such Purchaser or any member of the National Association of Securities Dealers, Inc. PORTAL system in applying to designate and thereafter maintain the eligibility of the Restricted Shares for trading through PORTAL. The Company's obligations under this Section 7.4 shall at all times be contingent upon receipt from the prospective transferee of Restricted Shares of a written agreement to take all reasonable precautions to safeguard the Rule 144A Information from disclosure to anyone other than persons who will assist such transferee in evaluating the purchase of any Restricted Shares and to use such Rule 144A Information only for such evaluation purposes.

8. Miscellaneous.

8.1 Successors and Assigns. This Agreement, and the rights and obligations of a Purchaser hereunder, may be assigned by such Purchaser to any person or entity to which at least 355,000 Shares, as adjusted for stock splits, stock dividends, recapitalizations and similar events (or 100% of the Shares originally purchased hereunder by such Purchaser, if less than 355,000 Shares), are transferred by such Purchaser, and such transferee shall be deemed a "Purchaser" for purposes of this Agreement; provided that the transferee provides written notice of such assignment to the Company and agrees to be bound by the terms and conditions set forth herein.

8.2 Confidentiality. The Purchasers agree that they will keep confidential and will not disclose or divulge any confidential, proprietary or secret information which they may obtain from the Company pursuant to financial statements, reports and other materials submitted by the Company to the Purchasers pursuant to this Agreement, or pursuant to visitation or inspection rights granted hereunder, unless such information is known, or until such information becomes

known, to the public; provided, however, that a Purchaser may disclose such information (i) to its attorneys, accountants, consultants, and other professionals to the extent necessary to obtain their services in connection with its investment in the Company, (ii) to any prospective purchaser of any Shares from such Purchaser as long as such prospective purchaser agrees in writing to be bound by the provisions of this Section, or (iii) to any affiliate of such Purchaser or to a partner, shareholder or subsidiary of such Purchaser; subject to the agreement of such party to keep such information confidential as set forth herein.

8.3 Survival of Representations and Warranties. All agreements, representations and warranties contained herein shall survive the execution and delivery of this Agreement and the closing of the transactions contemplated hereby.

8.4 Expenses. The Company shall pay, at the Closing, the reasonable costs and expenses of Hale and Dorr LLP, counsel to the Purchasers, not to exceed $15,000, in connection with the preparation of this Agreement and the other agreements and documents contemplated hereby and the closing of the transactions contemplated hereby.

8.5 Notices. All notices, requests, consents, and other communications under this Agreement shall be in writing and shall be delivered by hand, sent via a reputable nationwide overnight courier service or mailed by first class certified or registered mail, return receipt requested, postage prepaid:

If to the Company, at Sonus Networks, Inc., 5 Carlisle Road, Westford, MA 01886, Attn: President, or at such other address or addresses as may have been furnished in writing by the Company to the Purchasers, with a copy to Bingham Dana LLP, 150 Federal Street, Boston, MA 02110, Attn: David L. Engel, Esq.

If to a Purchaser, at its address as set forth on Schedule I attached hereto, or at such other address or addresses as may have been furnished to the Company in writing by such Purchaser, with a copy to Hale and Dorr LLP, 60 State Street, Boston, MA 02109, Attn: John M. Westcott, Jr., Esq.

If to a Founder, at his address as set forth on Schedule II attached hereto, or at such other address or addresses as may have been furnished in writing by such Founder to the Company and the Purchasers.

Notices provided in accordance with this Section 8.5 shall be deemed delivered upon personal delivery, one business day after being sent via a reputable nationwide overnight courier service, or five business days after deposit in the mail.

8.6 Brokers. The Company, the Founders and the Purchasers each (i) represents and warrants to the other parties hereto that he, she or it has retained

no finder or broker in connection with the transactions contemplated by this Agreement, and (ii) will indemnify and save the other parties harmless from and against any and all claims, liabilities or obligations with respect to brokerage or finders' fees or commissions in connection with the transactions contemplated by this Agreement asserted by any person on the basis of any agreement, statement or representation alleged to have been made by such indemnifying party.

8.7 Entire Agreement. This Agreement and the Ancillary Agreements embody the entire agreement and understanding between the parties hereto with respect to the subject matter hereof and supersedes all prior agreements and understandings relating to such subject matter.

8.8 Amendments and Waivers. Except as otherwise expressly set forth in this Agreement, any term of this Agreement may be amended and the observance of any term of this Agreement may be waived (either generally or in a particular instance and either retroactively or prospectively), with the written consent of the Company and the holders of at least 66 2/3% of the shares of Common Stock issued or issuable upon conversion of the Shares, provided, however, that no consent shall be required in order to add additional Purchasers pursuant to Section 1.2(b) hereof, or to revise Schedule I in connection therewith. Any amendment or waiver effected in accordance with this Section 8.8 shall be binding upon each holder of any Shares (including shares of Common Stock into which such Shares have been converted), each future holder of all such securities and the Company. No amendment shall increase any obligation of a Founder hereunder without the express written consent of such Founder. No waivers of or exceptions to any term, condition or provision of this Agreement, in any one or more instances, shall be deemed to be, or construed as, a further or continuing waiver of any such term, condition or provision.

8.9 Counterparts. This Agreement may be executed in one or more counterparts, each of which shall be deemed to be an original, but all of which shall be one and the same document.

8.10 Section Headings. The section headings are for the convenience of the parties and in no way alter, modify, amend, limit, or restrict the contractual obligations of the parties.

8.11 Severability. The invalidity or unenforceability of any provision of this Agreement shall not affect the validity or enforceability of any other provision of this Agreement.

8.12 Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the State of Delaware.

Executed as of the date first written above.

SONUS NETWORKS, INC.

By: /s/ Rubin Gruber

Rubin Gruber
President

FOUNDERS:

/s/ Rubin Gruber

Rubin Gruber

/s/ M. G. Hluchyj

Michael G. Hluchyj

/s/ Kwok P. Wong

Kwok P. Wong

PURCHASERS:

North Bridge Venture Partners II, L.P.

By: North Bridge Venture Management II, L.P.,
its General Partner

By: /s/ Edward T. Anderson

Edward T. Anderson
General Partner

Matrix Partners IV, L.P.

By: Matrix IV Management Co., L.P., its General Partner

By: /s/ Paul J. Ferri

Paul J. Ferri
General Partner

[Signature Page 1 of 3 to Series A Preferred Stock Purchase Agreement]

Charles River Partnership VIII,
A Limited Partnership

By: Charles River VIII GP Limited Partnership,
its General Partner

By:

Richard M. Burnes
General Partner

Bessemer Venture Venture Partners

BESSEMER VENTURE PARTNERS IV L.P.
By: Deer IV & Co. LLC, General Partner
By: /s/ Robert H. Buescher Manager

By: Robert H. Buescher

Bedrock Capital I, L.P.

By: /s/ Thomas S. Volpe

Bedrock Capital Side-by-Side, L.P.

By: /s/ Thomas S. Volpe

/s/ James Dolce Jr.
- ---
Jim Dolce

/s/ Derek M. James
- ---
Derek James

[Signature Page 2 of 3 to Series A Preferred Stock Purchase Agreement]

- ----------
Rubin Gruber

/s/ Kwok P. Wong
- ----------
Kwok P. Wong

/s/ David L. Engel
- ----------
David L. Engel

/s/ David Rokoff
- ----------
David Rokoff

/s/ Anthony J. Risica
- ----------
Anthony J. Risica

- ----------
Cheng Wu

/s/ Mike G. Hluchyj
- ----------
Mike G. Hluchyj

/s/ Robert G. Gallager
- ----------
Robert G. Gallager

/s/ Barry Ross
- ----------
Barry Ross

/s/ Anthony S. Acampora
- ----------
Anthony S. Acampora

[Signature Page 3 of 3 to Series A Preferred Stock Purchase Agreement]

SONUS NETWORKS, INC.

SERIES B PREFERRED STOCK PURCHASE AGREEMENT

September 23, 1998

SONUS NETWORKS, INC.

SERIES B PREFERRED STOCK
PURCHASE AGREEMENT

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SERIES B PREFERRED STOCK PURCHASE AGREEMENT

This Series B Preferred Stock Purchase Agreement (this "Agreement"), dated as of September 23, 1998, is entered into by and among Sonus Networks, Inc., a Delaware corporation (the "Company"), and the persons and entities listed on Schedule I attached hereto (individually, a "Purchaser" and, collectively, the "Purchasers").

In consideration of the mutual promises and covenants contained in this Agreement, the parties hereto agree as follows:

1. Authorization and Sale of Shares.

1.1 Authorization. The Company has duly authorized the sale and issuance, pursuant to the terms of this Agreement, of 3,144,287 shares of its Series B Convertible Preferred Stock, $0.01 par value per share (the "Series B Preferred Stock"), having the rights, restrictions, privileges and preferences set forth in the Amended and Restated Certificate of Incorporation of the Company attached hereto as Exhibit A (the "Restated Certificate"). The Company has adopted and filed the Restated Certificate with the Secretary of State of the State of Delaware.

1.2 Sale of Shares. Subject to the terms and conditions of this Agreement the Company will issue and sell to each Purchaser, and each Purchaser will purchase, for a purchase price of $5.00 per share, such number of shares of Series B Preferred Stock as is set forth opposite such Purchaser's name on Schedule I attached hereto. The shares of Series B Preferred Stock being sold under this Agreement are referred to as the "Shares." The Company's agreement with each of the Purchasers is a separate agreement, and the sale of Shares to each of the Purchasers is a separate sale.

1.3 Use of Proceeds. The Company will use the proceeds from the sale of the Shares for working capital purposes and the repayment of certain indebtedness.

2. The Closing. The closing (the "Closing") of the sale and purchase of the Shares under this Agreement shall take place at the offices of Bingham Dana LLP, 150 Federal Street, Boston, Massachusetts at 9:00 a.m. on the date of this Agreement, or at such other time, date and place as are mutually agreeable to the Company and the Purchasers. The date of the Closing is hereinafter referred to as the "Closing Date." At the Closing:

(a) the Company shall deliver to the Purchasers a certificate, as of the most recent practicable date, as to the corporate good standing of the Company issued by the Secretary of State of the State of Delaware;

(b) the Company shall deliver to the Purchasers the Restated Certificate of Incorporation, as in effect as of the Closing Date, certified by the Secretary of State of the State of Delaware;

(c) the Company shall deliver to the Purchasers a Certificate of the Secretary of the Company attesting to (i) the By-laws of the Company, and (ii) resolutions of the Board of Directors of the Company authorizing and approving all matters in connection with this Agreement and the transactions contemplated hereby;

(d) Bingham Dana LLP, counsel for the Company, shall deliver to the Purchasers an opinion, dated the Closing Date, in the form attached hereto as Exhibit B;

(e) the Company and the Purchasers shall execute and deliver the Amended and Restated Investor Rights Agreement in the form attached hereto as Exhibit C (the "Investor Agreement");

(f) the Company, the Purchasers and the other parties thereto shall execute and deliver the Amended and Restated Right of First Refusal and Co-Sale Agreement in the form attached hereto as Exhibit D (the "Right of First Refusal Agreement");

(g) the Company shall deliver to each Purchaser a certificate for the number of Shares being purchased by such Purchaser, registered in the name of such Purchaser;

(h) each Purchaser shall pay to the Company the purchase price for the Shares being purchased by such Purchaser, by wire transfer or certified check; and

(i) the Company and each of the Purchasers shall execute and deliver a cross-receipt.

(j) a representation letter executed by the President of the Company as to interests of "disqualified persons" in the form of Exhibit E.

3. Representations of the Company. The Company hereby represents and warrants to the Purchasers as follows, subject in each case to such exceptions as are specifically contemplated by this Agreement or as are set forth in the Disclosure Schedule attached hereto (the "Disclosure Schedule"). Notwithstanding any other provision of this Agreement or the Disclosure Schedule, each exception set forth in the Disclosure Schedule will be deemed to qualify each representation and warranty set forth

in this Agreement that is specifically identified (by cross-reference or otherwise) in the Disclosure Schedule as being qualified by such exception.

3.1 Organization and Standing. The Company is a corporation duly organized, validly existing and in good standing under the laws of the State of Delaware and has full corporate power and authority to conduct its business as presently conducted and as proposed to be conducted by it and to enter into and perform this Agreement and to carry out the transactions contemplated by this Agreement. The Company is duly qualified to do business as a foreign corporation and is in good standing in the Commonwealth of Massachusetts and in any other jurisdiction in which the failure to so qualify would have a material adverse effect on the operations or financial condition of the Company. The Company has furnished to special counsel to the Purchasers true and complete copies of its Restated Certificate and By-laws, each as amended to date and presently in effect.

3.2 Capitalization. The authorized capital stock of the Company (immediately prior to the Closing) consists of (a) 12,000,000 shares of preferred stock, $0.01 par value per share (of which 7,220,000 shares have been designated as Series A Convertible Preferred Stock (the "Series A Preferred Stock") and 3,197,857 shares have been designated as Series B Convertible Preferred Stock), of which 7,180,000 shares of Series A Preferred Stock and no shares of Series B Preferred Stock are issued or outstanding and (b) 20,000,000 shares of common stock, $0.001 par value per share (the "Common Stock"), of which 4,866,843 shares are issued and outstanding, 2,467,907 shares have been reserved for issuance pursuant to the Company's 1997 Stock Incentive Plan, of which 1,584,750 shares have been issued in the form of restricted shares of Common Stock pursuant to the terms of such Plan, and 10,364,287 shares have been reserved for issuance upon the conversion of the Shares and shares of Series A Preferred Stock. At the Closing, the Common Stock, the Series A Preferred Stock and the Series B Preferred Stock will have the voting powers, designations, preferences, rights and qualifications, and limitations or restrictions set forth in the Restated Certificate. All of the issued and outstanding shares of Common Stock have been duly authorized and validly issued and are fully paid and nonassessable. Except for the Series A Preferred Stock or as set forth in Section 3.2 of the Disclosure Schedule or as contemplated by this Agreement, (i) no subscription, warrant, option, convertible security or other right (contingent or otherwise) to purchase or acquire any shares of capital stock of the Company is authorized or outstanding, (ii) the Company has no obligation (contingent or otherwise) to issue any subscription, warrant, option, convertible security or other such right or to issue or distribute to holders of any shares of its capital stock any evidences of indebtedness or assets of the Company, and (iii) the Company has no obligation (contingent or otherwise) to purchase, redeem or otherwise acquire any shares of its capital stock or any interest therein or to pay any dividend or make any other distribution in respect thereof. All of the issued and outstanding shares of capital stock of the Company have been offered, issued and sold by the Company in compliance with applicable Federal and state securities laws.

3.3 Subsidiaries, Etc. The Company has no subsidiaries and does not own or control, directly or indirectly, any shares of capital stock of any other corporation or any interest in any partnership, joint venture or other non-corporate business enterprise.

3.4 Issuance of Shares; Agreements. The issuance, sale and delivery of the Shares in accordance with this Agreement, and the issuance and delivery of the shares of Common Stock issuable upon conversion of the Shares, have been duly authorized by all necessary corporate action on the part of the Company, and all such shares have been duly reserved for issuance. The Shares when so issued, sold and delivered against payment therefor in accordance with the provisions of this Agreement, and the shares of Common Stock issuable upon conversion of the Shares, when issued upon such conversion, will be duly and validly issued, fully paid and non-assessable. Except as set forth in Section 3.4 of the Disclosure Schedule or as contemplated by this Agreement, there are no agreements, written or oral, between the Company and any holder of its capital stock, or, to the best of the Company's knowledge, among any holders of its capital stock, relating to the acquisition (including without limitation rights of first refusal or pre-emptive rights), disposition, registration under the Securities Act of 1933, as amended (the "Securities Act")), or voting of the capital stock of the Company.

3.5 Authority for Agreement. The execution, delivery and performance by the Company of this Agreement and all other agreements required to be executed by the Company at the Closing pursuant to Section 2 (the "Ancillary Agreements"), and the consummation by the Company of the transactions contemplated hereby and thereby, have been duly authorized by all necessary corporate action. This Agreement and the Ancillary Agreements have been, or as of the Closing will have been, duly executed and delivered by the Company and constitute, or as of the Closing will constitute, valid and binding obligations of the Company enforceable in accordance with their respective terms. Except as set forth in Section 3.5 of the Disclosure Schedule, the execution of and performance of the transactions contemplated by this Agreement and the Ancillary Agreements and compliance with their provisions by the Company will not violate any provision of applicable law and will not conflict with or result in any breach of any of the terms, conditions or provisions of, or constitute a default under, or require a consent or waiver under, its Restated Certificate or By-laws (each as amended to date) or any material indenture, lease, agreement or other instrument to which the Company is a party or by which it or any of its properties is bound, or any decree, judgment, order, statute, rule or regulation applicable to the Company which would have a material adverse effect on the business, properties or results of operations of the Company (a "Material Adverse Effect").

3.6 Governmental Consents. Except as set forth in Section 3.6 of the Disclosure Schedule, no consent, approval, order or authorization of, or registration, qualification, designation, declaration or filing with, any governmental authority is

required on the part of the Company in connection with the execution and delivery of this Agreement, the offer, issuance, sale and delivery of the Shares, or the other transactions to be consummated at the Closing, as contemplated by this Agreement, other than such filings as shall have been made prior to and shall be effective on and as of the Closing. Based on the representations made by the Purchasers in Section 4 of this Agreement, the offer and sale of the Shares to the Purchasers will be exempt from the registration requirements of applicable Federal and state securities laws.

3.7 Litigation. Except as set forth in Section 3.7 of Disclosure Schedule, there is no action, suit or proceeding, or governmental inquiry or investigation, pending, or, to the best of the Company's knowledge, any basis therefor or threat thereof, against the Company, which questions the validity of this Agreement or the right of the Company to enter into it, or which might result, either individually or in the aggregate, in any material adverse change in the business, assets or condition, financial or otherwise, of the Company, nor is there any litigation pending, or, to the best of the Company's knowledge, any basis therefor or threat thereof, against the Company by reason of the activities of the Company, or negotiations by the Company with possible investors in the Company.

3.8 Financial Statements. The Company has delivered to the Purchasers copies of (i) its audited balance sheet as of December 31, 1997, and the related audited statements of operations, stockholders' equity, and cash flows for the period from August 7, 1997 to December 31, 1997, as audited by Ernst & Young, LLP, together with the report of Ernst & Young, LLP thereon, and (ii) its unaudited balance sheet as of August 31, 1998 (the "Most Recent Balance Sheet"), and the related unaudited statements of operations, stockholders' equity, and cash flows for the eight (8) month period then ended and for the period August 7, 1997 to August 31, 1998 (the "Interim Financials"). Each of such balance sheets fairly presents, in all material respects, the financial condition of the Company as of its respective date, and each of such statements of operations, stockholders' equity, and cash flows fairly presents, in all material respects, the results of operations, stockholders' equity, or cash flows, as the case may be, of the Company for the period covered thereby; in each case in accordance with generally accepted accounting principles, subject, in the case of Interim Financials, to the absence of footnotes and normal year-end adjustments.

3.9 Absence of Certain Changes. Since the date of the Most Recent Balance Sheet, there have not been any changes in the business, assets, financial condition, or operating results of the Company that, either individually or in the aggregate, have had a Material Adverse Effect (as defined in Section 3.5 hereof).

3.10 Taxes. The Company has timely filed all tax returns required to be filed by it on or prior to the date hereof, each such tax return has been prepared in compliance with all applicable laws and regulations, and, to the best of the Company's knowledge, all such tax returns are true and accurate in all material respects. All taxes

due and payable by the Company with respect to any periods ending on or before the Closing Date have been paid. No claim has ever been made by a taxing authority in a jurisdiction where the Company does not pay tax or file tax returns that the Company is or may be subject to taxes assessed by such jurisdiction. There are no liens for taxes (other than current taxes not yet due and payable) on the assets of the Company. No action, suit, taxing authority proceeding, or audit with respect to any tax is pending or, to the best of the Company's knowledge, threatened, against or with respect to the Company. No deficiency or proposed adjustment in respect of taxes that has not been settled or otherwise resolved has been asserted or assessed by any taxing authority against the Company. The Company has withheld and paid all taxes required to have been withheld and paid by it in connection with amounts paid or owing to any employee, creditor, independent contractor, or other person. Neither the Company nor any of its stockholders has ever filed (a) an election pursuant to Section 1362 of the Internal Revenue Code of 1986, as amended (the "Code"), that the Company be taxed as an S Corporation, or (b) consent pursuant to Section 341(f) of the Code relating to collapsible corporations.

3.11 Title to Properties. Except as set forth in Section 3.11 of the Disclosure Schedule, the Company has good and valid title to its properties and assets reflected in the Most Recent Balance Sheet or acquired by it since the date of the Most Recent Balance Sheet (other than properties and assets disposed of in the ordinary course of business since the date of the Most Recent Balance Sheet), and, except as set forth in Section 3.11 of the Disclosure Schedule, all such properties and assets are free and clear of mortgages, pledges, security interests, liens, charges, claims, restrictions and other encumbrances (including without limitation, easements and licenses), except for liens for or current taxes not yet due and payable and minor imperfections of title, if any, not material in nature or amount and not materially detracting from the value or impairing the use of the property subject thereto or impairing the ability or operations of the Company, including without limitation, the ability of the Company to secure financing using such properties and assets as collateral. To the best of the Company's knowledge, there are no condemnation, environmental, zoning or other land use regulation proceedings, either instituted or planned to be instituted, which would adversely affect the use or operation of the Company's properties and assets for their intended uses and purposes, or the value of such properties, and the Company has not received notice of any special assessment proceedings which would affect such properties and assets.

3.12 Leasehold Interests. Each lease or agreement to which the Company is a party under which it is a lessee of any property, real or personal, is a valid and subsisting agreement, duly authorized and entered into by the Company, without any default of the Company thereunder and, to the best of the Company's knowledge, without any default thereunder of any other party thereto. No event has occurred and is continuing which, with due notice of lapse of time or both, would constitute a default or event of default by the Company under any such lease or agreement or, to the best of the Company's knowledge, by any other party thereto. The Company's possession of such

property has not been disturbed and, to the best of the Company's knowledge, no claim has been asserted against the Company adverse to its rights in such leasehold interests.

3.13 Intellectual Property.

(a) To the best of the Company's knowledge, no third party has claimed or has reason to claim that any person employed by or affiliated with the Company, in connection with his or her employment by or affiliation with the Company, (i) has violated or is violating any of the terms or conditions of his or her employment, non-competition or non-disclosure agreement with such third party, (ii) has disclosed or is disclosing or has utilized or is utilizing any trade secret or proprietary information or documentation of such third party or (iii) has interfered or is interfering in the employment relationship between such third party and any of its present or former employees. No third party has requested information from the Company which suggests that such a claim might be contemplated. To the best of the Company's knowledge, no person employed by or affiliated with the Company has employed or proposes to employ any trade secret or any information or documentation proprietary to any former employer, and to the best of the Company's knowledge, no person employed by or affiliated with the Company has violated any confidential relationship which such person may have had with any third party, in connection with the development, manufacture or sale or any product or proposed product or the development or sale of any service or proposed service of the Company, and the Company has no reason to believe there will be any such employment or violation. To the best of the Company's knowledge, none of the execution or delivery of this Agreement, or the carrying on of business of the Company by any officer, director or key employee of the Company, or the conduct or proposed conduct of the business of the Company, will conflict with or result in a breach of the terms, conditions or provisions of or constitute a default under any contract, covenant or instrument under which any such person is obligated which would have a Material Adverse Effect.

(b) Set forth in Section 3.13(b) of the Disclosure Schedule is a list of all domestic and foreign patents, patent rights, patent applications, trademarks, trademark applications, service marks, service mark applications, trade names and copyrights, and all applications for such which are currently in the process of being prepared, owned by or registered in the name of the Company, or of which the Company is a licensor or licensee or in which the Company has any right, and in each case a brief description of the nature of such right. Except as set forth in Section 3.13(b) of the Disclosure Schedule, the Company owns or possesses adequate licenses or other rights to use all patents, patent applications, trademarks, trademark applications, service marks, service mark applications, trade names, copyrights, manufacturing processes, formulae, trade secrets, customer lists and know-how (collectively, "Intellectual Property") necessary for the conduct of its business as conducted and as proposed to be conducted. Except as otherwise provided in Section 3.13(b) of the Disclosure Schedule, no claim is pending or, to the best of the Company's knowledge, threatened to the effect that the

operations of the Company infringe upon or conflict with the asserted rights of any other person under any Intellectual Property, and, to the best of the Company's knowledge, there is no basis for any such claim (whether or not pending or threatened). No claim is pending or, to the knowledge of the Company, threatened to the effect that any such Intellectual Property owned or licensed by the Company, or which the Company otherwise has the right to use, is invalid or unenforceable by the Company, and, to the best of the Company's knowledge, there is no basis for any such claim (whether or not pending or threatened). To the best of the Company's knowledge, all technical information developed by and belonging to the Company which has not been patented has been kept confidential. The Company has not granted or assigned to any other person or entity any right to manufacture, have manufactured, assemble or sell the products or proposed products or to provide the services or proposed services of the Company.

3.14 Material Contracts and Obligations. Except as contemplated by this Agreement or as listed in Section 3.14 of the Disclosure Schedule, the Company is not a party to any material agreement or commitment of any nature, including without limitation (a) any agreement which requires future expenditures by the Company in excess of $50,000, (b) any employment or consulting agreement, employee benefit, bonus, pension, profit-sharing, stock option, stock purchase or similar plan or arrangement, or distributor or sales representative agreement, (c) any agreement with any stockholder, officer or director of the Company, or any "affiliate" or "associate" of such persons (as such terms are defined in the rules and regulations promulgated under the Securities Act, including without limitation any agreement or other arrangement providing for the furnishing of services by, rental of real or personal property from, or otherwise requiring payments to, any such person or entity or (d) any agreement relating to the intellectual property rights of the Company.

3.15 Compliance. The Company has, to its knowledge, in all material respects, complied with all laws, regulations and orders applicable to its present and proposed business and has all material permits and governmental licenses required thereby. There is no term or provision of any mortgage, indenture, contract, agreement or instrument to which the Company is a party or by which it is bound, or, to the best of the Company's knowledge, of any provision of any state or Federal judgment, decree, order, statute, rule or regulation applicable to or binding upon the Company, which materially adversely affects or, so far as the Company may now foresee, in the future is reasonably likely to materially adversely affect, the business, assets or condition, financial or otherwise, of the Company. To the best of the Company's knowledge, no employee of the Company is in violation of any term of any contract or covenant (either with the Company or with another entity) relating to employment, patents, proprietary information disclosure, non-competition or non-solicitation.

3.16 Employees.

(a) Each holder of Common Stock has executed and delivered to the Company a Stock Repurchase Agreement in substantially the form attached hereto as Exhibit F, and all of such agreements are in full force and effect.

(b) Each employee of the Company has executed and delivered to the Company a Noncompetition and Confidentiality Agreement covering a period of one year following the termination of such employee's employment with the Company, in substantially the form attached hereto as Exhibit G, and all of such agreements are in full force and effect.

(c) None of the employees of the Company is represented by any labor union, and there is no labor strike or other labor trouble pending with respect to the Company (including, without limitation, any organizational drive) or, to the best of the Company's knowledge, threatened.

3.17 ERISA. (i) Except as set forth on Schedule 3.17 hereto, the Company does not maintain and has no obligation to make contributions to, any employee benefit plan (an "ERISA Plan") within the meaning of Section 3(3) of the United States Employee Retirement Income Security Act of 1974, as amended ("ERISA"), or any other retirement, profit sharing, stock option, stock bonus or employee benefit plan (a "Non-ERISA Plan"). The Company has heretofore delivered to the Purchasers true, correct and complete copies of each ERISA Plan and each Non-ERISA Plan. All such ERISA Plans and Non-ERISA Plans have been maintained and operated in all material respects in accordance with all federal, state and local laws applicable to such plans, and the terms and conditions of the respective plan documents, except where the failure to so maintain or operate such ERISA Plans and Non-ERISA Plans would not have a Material Adverse Effect.

(ii) No material liability to the United States Pension Benefit Guaranty Corporation ("PBGC"), or to any multi-employer pension plan within the meaning of section 3(35) of ERISA, or to any other governmental authority, pension or retirement board, or other agency, under any federal, state or local law, has been or is expected to be incurred by the Company with respect to any ERISA or Non-ERISA Plan. There has been no "reportable event" within the meaning of Section 4043(b) of ERISA with respect to any ERISA Plan, and no event or condition that presents a material risk of termination of any ERISA Plan by the PBGC.

(iii) Full payment has been made of all material amounts that the Company is required under the terms of each ERISA Plan and Non-ERISA Plan, or pursuant to applicable federal, state or local law, to have paid as contributions to such ERISA Plan or Non-ERISA Plan as of the last day of the most recent fiscal year of such ERISA Plan or Non-ERISA Plan ended prior to the date hereof, and no accumulated

funding deficiency (as defined in Section 302 of ERISA and Section 412 of the Code), whether or not waived, exists with respect to any ERISA Plan.

3.18 Books and Records. The minute books of the Company contain complete and accurate records of all meetings and other corporate actions of its stockholders and its Board of Directors and committees thereof. The stock ledger of the Company is complete and reflects all issuances, transfers, repurchases and cancellations of shares of capital stock of the Company.

3.19 U.S. Real Property Holding Corporation. The Company is not now and has never been a "United States Real Property Holding Corporation" as defined in Section 897(c)(2) of the Code and Section 1.897-2(b) of the Regulations promulgated by the Internal Revenue Service.

3.20 Disclosures. Neither this Agreement nor any Schedule or Exhibit hereto, nor any certificate or instrument furnished to the Purchasers at the Closing or as required by the terms of this Agreement, when read together, contains or will contain any untrue statement of a material fact or omits or will omit to state a material fact necessary in order to make the statements contained herein or therein, in light of the circumstances under which they were made, not misleading.

4. Representations of the Purchasers. Each Purchaser represents and warrants to the Company as follows:

4.1 Investment. Such Purchaser is acquiring the Shares, and the shares of Common Stock into which the Shares may be converted, for its or his own account for investment and not with a view to, or for sale in connection with, any distribution thereof, nor with any present intention of distributing or selling the same; and such Purchaser has no present or contemplated agreement, undertaking, arrangement, obligation, indebtedness or commitment providing for the disposition thereof. Such Purchaser acknowledges that the Shares are restricted securities as defined under the Securities Act and shall bear the legends set forth in Section 6.3 hereof.

4.2 Authority. Such Purchaser has full power and authority to enter into and to perform this Agreement in accordance with its terms. Such Purchaser represents that it has not been organized, reorganized or recapitalized specifically for the purpose of investing in the Company. This Agreement and the Ancillary Agreement to be executed by such Purchaser have been duly executed and delivered by such Purchaser and constitute valid and binding obligations of such Purchaser enforceable in accordance with their respective terms. The execution of and performance of the transactions contemplated by this Agreement and the Ancillary Agreements to be executed by such Purchaser and compliance with their provisions by such Purchaser will not violate any provision of law and will not conflict with or result in any breach of any of the terms, conditions or provisions of, or constitute a default under, or require a consent or waiver

under, its organizational documents (each as amended to date) or any indenture, lease, agreement or other instrument to which the Purchaser is a party or by which it or any of its properties is bound, or any decree, judgment, order, statute, rule or regulation applicable to such Purchaser.

4.3 Experience. Such Purchaser has carefully reviewed the representations concerning the Company contained in this Agreement and has made detailed inquiry concerning the Company, its business and its personnel; the officers of the Company have made available to such Purchaser any and all written information which it has requested and have answered to such Purchaser's satisfaction all inquiries made by such Purchaser; and such Purchaser has sufficient knowledge and experience in investing in companies similar to the Company so as to be able to evaluate the risks and merits of its investment in the Company and is able financially to bear the risks thereof, including a complete loss of its investment. Such Purchaser understands that an investment in the Company involves a high degree of risk in view of the fact that the Company is a start-up enterprise with no operating history, and there may never be an established market for the Company's capital stock.

4.4 Status. Such Purchaser is an "accredited investor" as that term is defined in Rule 501 of Regulation D promulgated under the Securities Act.

5. Covenants of the Company.

5.1 Inspection. The Company shall permit each Purchaser (or any of its affiliates) holding not less than 157,214 shares of Series B Stock at the relevant time (as adjusted for stock splits, stock dividends, recapitalizations and similar events), or any authorized representative thereof, to visit and inspect the properties of the Company, including its corporate and financial records, and to discuss its business and finances with officers of the Company, during normal business hours following reasonable notice and as often as may be reasonably requested, without interruption of the business of the Company and subject to the confidentiality obligations of Section 7.2 hereof.

5.2 Financial Statements and Other Information.

(a) So long as a Purchaser (or any of its affiliates) holds at least 157,214 shares of Series B Preferred Stock (as adjusted for stock splits, stock dividends, recapitalizations and similar events), the Company shall deliver to such Purchaser:

(i) within 90 days after the end of each fiscal year of the Company, an audited balance sheet of the Company as at the end of such year, and audited statements of operations, stockholders' equity and cash flows of the Company for such year, certified by certified public accountants of established national reputation selected by the Company, and prepared in accordance with generally accepted accounting principles; and

(ii) within 45 days after the end of each fiscal quarter of the Company, an unaudited balance sheet of the Company as at the end of such quarter, and unaudited statements of operations and cash flows of the Company for such fiscal quarter and for the current fiscal year to the end of such fiscal quarter.

(b) So long as a Purchaser (or any of its affiliates) holds at least 157,214 shares of Series B Preferred Stock (as adjusted for stock splits, stock dividends, recapitalizations and similar events), the Company shall deliver to such Purchaser:

(i) within 30 days after the end of each month, an unaudited balance sheet of the Company as at the end of such month and unaudited statements of operations and cash flows of the Company for such month and for the current fiscal year to the end of such month, setting forth in comparative form the Company's projected financial statements for the corresponding periods for the current fiscal year;

(ii) as soon as available, but in any event within 30 days after commencement of each new fiscal year, a budget, consisting of projected financial statements for such fiscal year; and

(iii) with reasonable promptness, such other notices, information and data with respect to the Company as the Company delivers to the holders of its Common Stock, and such other information and data as such Purchaser may from time to time reasonably request.

(c) The foregoing financial statements shall be prepared on a consolidated basis if the Company then has any subsidiaries. The financial statements delivered pursuant to clause (ii) of paragraph (a) and clause (i) of paragraph (b) shall be accompanied by a certificate of the chief financial officer of the Company stating that such statements have been prepared in accordance with generally accepted accounting principles consistently applied (except as noted) and fairly present, in all material respects, the financial condition and results of operations of the Company at the date thereof and for the periods covered thereby (subject, in the case of any such unaudited financial statements to the absence of footnotes and to year-end adjustments).

5.3 Material Changes and Litigation. The Company shall promptly notify the Purchasers of any material adverse change in the business, assets or condition, financial or otherwise, of the Company and of any litigation or governmental proceeding or investigation brought or, to the best of the Company's knowledge, threatened against the Company, or against Rubin Gruber, Michael G. Hluchyj or Kwok P. Wong (the "Founders") or any officer, director, key employee or principal stockholder of the Company materially adversely affecting or which, if adversely determined, would

materially adversely affect the Company's business, prospects, assets or condition, financial or otherwise.

5.4 Insurance.

(a) The Company shall maintain for a period of at least three years from the procurement thereof, term life insurance upon the lives of each of the Founders, in the amount of $1,000,000, with the proceeds payable to the Company.

(b) The Company shall maintain in effect, policies of workers' compensation insurance and of insurance with respect to its properties and business, including, without limitation, insurance against loss, damage, fire, theft, public liability and other risks, which is adequate for the maintenance and preservation of the Company's properties and business.

5.5 Employee Agreements. The Company shall require all employees hereafter employed or engaged by the Company who are at or above the director level or other key employees to enter into a Noncompetition and Confidentiality Agreement covering a period of one year following the termination of such employee's employment with the Company, substantially in the form attached hereto as Exhibit G or in such other form as may be approved by the Board of Directors. The Company shall require all employees not covered by the foregoing sentence to enter into a Confidentiality Agreement substantially in the form attached hereto as Exhibit H or in such other form as may be approved by the Board of Directors.

5.6 Related Party Transactions. The Company shall not enter into any agreement with any stockholder, officer or director of the Company, or any "affiliate" or "associate" of such persons (as such terms are defined in the rules and regulations promulgated under the Securities Act), including without limitation any agreement or other arrangement providing for the furnishing of services by, rental of real or personal property from, or otherwise requiring payments to, any such person or entity, without the consent of at least a majority of the members of the Company's Board of Directors having no interest in such agreement or arrangement.

5.7 Reservation of Common Stock. The Company shall reserve and maintain a sufficient number of shares of Common Stock for issuance upon conversion of all of the outstanding Shares.

5.8 Board of Directors. So long as Bedrock Capital Partners I, L.P. and its affiliates continue to hold in the aggregate no less than 598,800 (as adjusted for stock splits, stock dividends, recapitalizations and similar events), the Company will permit any authorized representative of Bedrock Capital Partners I, L.P., who is approved in advance by the Company (which consent shall not be unreasonably withheld), to attend (or participate by telephone in) all meetings of the Board of Directors as a non-voting

observer (unless such individual is otherwise a director), but with the right to participate in all discussions of the Board of Directors, and shall provide Bedrock Capital Partners I, L.P. with such notice, minutes, consents (including actions by written consent in lieu of a meeting), written materials and other information with respect to such meetings as are delivered to the directors of the Company; provided, however, that the Company may exclude such Purchaser from access to any material or portion thereof if the Company believes, upon the advice of counsel, that such exclusion is reasonably necessary to preserve the attorney-client privilege or to protect highly confidential proprietary information of the Company or a third party to which the Company has a contractual obligation of confidentiality.

5.9 Termination of Covenants. The covenants of the Company contained in Sections 5.1 through 5.8 shall terminate, and be of no further force or effect, upon the closing of the Company's first offering of Common Stock to the public, resulting in net proceeds to the Company of at least $10,000,000, and at a price per share of at least $10.00 (as adjusted for stock splits, stock dividends, recapitalizations and similar events) or, at such time as the Purchasers (together with any affiliated entities to whom Shares have been transferred) own less than an aggregate of 786,072 shares of Series B Preferred Stock (as adjusted for stock splits, stock dividends, recapitalizations and similar events), unless the Company has, prior to such time, failed to redeem any shares of Series B Preferred Stock when such redemption was due in accordance with Section 6 of Article IV of the Restated Certificate, which failure continues and has not been cured.

5.10 Qualified Small Business Stock. The Company shall submit to its stockholders (including the Purchasers) and to the Internal Revenue Service any reports that may be required under Section 1202(d)(1)(C) of the Code and the Regulations promulgated thereunder. In addition, within ten days after a Purchaser's written request therefor, the Company shall deliver to such Purchaser a written statement indicating whether such Purchaser's interest in the Company constitutes "qualified small business stock" as defined in Section 1202(c) of the Code.

6. Transfer of Shares.

6.1 Restricted Shares. "Restricted Shares" means (i) the Shares, (ii) the shares of Common Stock issued or issuable upon conversion of the Shares, (iii) any shares of capital stock of the Company acquired by a Purchaser pursuant to the Investor Agreement or the Right of First Refusal Agreement, and (iv) any other shares of capital stock of the Company issued in respect of such shares (as a result of stock splits, stock dividends, reclassifications, recapitalizations, or similar events); provided, however, that shares of Common Stock which are Restricted Shares shall cease to be Restricted Shares (i) upon any sale pursuant to a registration statement under the Securities Act, or under Section 4(1) of the Securities Act or Rule 144 under the Securities Act, or (ii) at such time as they become eligible for sale under Rule 144(k) under the Securities Act.

6.2 Requirements for Transfer.

(a) Restricted Shares shall not be sold or transferred unless (1) either (i) they first shall have been registered under the Securities Act, or (ii) the Company first shall have been furnished with an opinion of legal counsel, reasonably satisfactory to the Company, to the effect that such sale or transfer is exempt from the registration requirements of the Securities Act and (2) such actions are in compliance with applicable state securities laws.

(b) Notwithstanding the foregoing, no registration or opinion of counsel shall be required for (i) a transfer by a Purchaser which is a partnership to a partner of such partnership or a retired partner of such partnership who retires after the date hereof, or to the estate of any such partner or retired partner, if the transferee agrees in writing to be subject to the terms of this Section 6 to the same extent as if he were an original Purchaser hereunder, or (ii) a transfer made in accordance with Rule 144 under the Securities Act.

6.3 Legend. Each certificate representing Restricted Shares shall bear a legend substantially in the following form:

> "The shares represented by this certificate have not been registered under the Securities Act of 1933, as amended, and may not be offered, sold or otherwise transferred, pledged or hypothecated unless and until such shares are registered under such Act or an opinion of counsel satisfactory to the Company is obtained to the effect that such registration is not required."

The foregoing legend shall be removed from the certificates representing any Restricted Shares, at the request of the holder thereof, at such time as they become eligible for resale pursuant to Rule 144(k) under the Securities Act.

6.4 Rule 144A Information. The Company shall, at all times during which it is neither subject to the reporting requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), nor exempt from reporting pursuant to Rule 12g3-2(b) under the Exchange Act, upon the written request of a Purchaser, provide in writing to such Purchaser, and to any prospective transferee of any Restricted Shares of such Purchaser, the information concerning the Company described in Rule 144A(d)(4) under the Securities Act ("Rule 144A Information"). The Company also shall, upon the written request of a Purchaser, cooperate with and assist such Purchaser or any member of the National Association of Securities Dealers, Inc. PORTAL system in applying to designate and thereafter maintain the eligibility of the Restricted Shares for trading through PORTAL. The Company's obligations under this Section 6.4 shall at all times be contingent upon receipt from the prospective transferee of Restricted Shares of a written agreement to take all reasonable precautions to safeguard

the Rule 144A Information from disclosure to anyone other than persons who will assist such transferee in evaluating the purchase of any Restricted Shares and to use such Rule 144A Information only for such evaluation purposes.

7. Miscellaneous.

7.1 Successors and Assigns. This Agreement, and the rights and obligations of each Purchaser hereunder, may be assigned by such Purchaser to any person or entity to which at least 157,214 Shares, as adjusted for stock splits, stock dividends, recapitalizations and similar events (or 100% of the Shares originally purchased hereunder by such Purchaser, if less than 157,214 Shares), are transferred by such Purchaser, and such transferee shall be deemed a "Purchaser" for purposes of this Agreement; provided that the transferee provides written notice of such assignment to the Company and agrees to be bound by the terms and conditions set forth herein.

7.2 Confidentiality. The Purchasers agree that they will keep confidential and will not disclose or divulge any confidential, proprietary or secret information which they may obtain from the Company pursuant to financial statements, reports and other materials submitted by the Company to the Purchasers pursuant to this Agreement or any rights granted hereunder, unless such information is known, or until such information becomes known, to the public; provided, however, that a Purchaser may disclose such information (i) to its attorneys, accountants, consultants, and other professionals to the extent necessary to obtain their services in connection with its investment in the Company, (ii) to any prospective purchaser of any Shares from such Purchaser as long as such prospective purchaser agrees in writing to be bound by the provisions of this Section, or (iii) to any affiliate of such Purchaser or to a partner, shareholder or subsidiary of such Purchaser; subject to the agreement of such party to keep such information confidential as set forth herein.

7.3 Survival of Representations and Warranties. All agreements, representations and warranties contained herein shall survive the execution and delivery of this Agreement and the closing of the transactions contemplated hereby.

7.4 Expenses. The Company shall pay, at the Closing, the reasonable costs and expenses of Testa, Hurwitz & Thibeault, LLP, counsel to the Purchasers, not to exceed $15,000 in the aggregate, in connection with the preparation of this Agreement and the other agreements and documents contemplated hereby and the closing of the transactions contemplated hereby.

7.5 Notices. All notices, requests, consents, and other communications under this Agreement shall be in writing and shall be delivered by hand, sent via a reputable nationwide overnight courier service or mailed by first class certified or registered mail, return receipt requested, postage prepaid:

If to the Company, at Sonus Networks, Inc., 5 Carlisle Road, Westford, MA 01886, Attn: President, or at such other address or addresses as may have been furnished in writing by the Company to the Purchasers, with a copy to Bingham Dana LLP, 150 Federal Street, Boston, MA 02110, Attn: David L. Engel, Esq.

If to a Purchaser, at its address as set forth on Schedule I attached hereto, or at such other address or addresses as may have been furnished to the Company in writing by such Purchaser, with a copy to Testa, Hurwitz & Thibeault, LLP, 125 High Street, Boston, MA 02110, Attn: Mitchell S. Bloom, Esq.

Notices provided in accordance with this Section 7.5 shall be deemed delivered upon personal delivery, one business day after being sent via a reputable nationwide overnight courier service, or five business days after deposit in the mail.

7.6 Brokers. The Company and the Purchasers each (i) represents and warrants to the other parties hereto that he, she or it has retained no finder or broker in connection with the transactions contemplated by this Agreement, and (ii) will indemnify and save the other parties harmless from and against any and all claims, liabilities or obligations with respect to brokerage or finders' fees or commissions in connection with the transactions contemplated by this Agreement asserted by any person on the basis of any agreement, statement or representation alleged to have been made by such indemnifying party.

7.7 Entire Agreement. This Agreement and the Ancillary Agreements embody the entire agreement and understanding between the parties hereto with respect to the subject matter hereof and supersedes all prior agreements and understandings relating to such subject matter.

7.8 Amendments and Waivers. Except as otherwise expressly set forth in this Agreement, any term of this Agreement may be amended and the observance of any term of this Agreement may be waived (either generally or in a particular instance and either retroactively or prospectively), with the written consent of the Company and the holders of at least 66 2/3% of the shares of Common Stock issued or issuable upon conversion of the Shares. Any amendment or waiver effected in accordance with this Section 7.8 shall be binding upon each holder of any Shares (including shares of Common Stock into which such Shares have been converted) and each future holder of all such securities and the Company. No waivers of or exceptions to any term, condition or provision of this Agreement, in any one or more instances, shall be deemed to be, or construed as, a further or continuing waiver of any such term, condition or provision.

7.9 Counterparts. This Agreement may be executed in one or more counterparts, each of which shall be deemed to be an original, but all of which shall be one and the same document.

7.10 Section Headings. The section headings are for the convenience of the parties and in no way alter, modify, amend, limit, or restrict the contractual obligations of the parties.

7.11 Severability. The invalidity or unenforceability of any provision of this Agreement shall not affect the validity or enforceability of any other provision of this Agreement.

7.12 Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the State of Delaware.

[remainder of page intentionally left blank]

Executed as an instrument under seal as of the date first written above.

COMPANY:

SONUS NETWORKS, INC.

By: /s/ Rubin Gruber

Rubin Gruber
President

PURCHASERS:

North Bridge Venture Partners II, L.P.
404 Wyman Street
Waltham, MA 02154

By: North Bridge Venture Management II, L.P., its General Partner

By: /s/ Edward T. Anderson

Edward T. Anderson
General Partner

North Bridge Venture Partners III, L.P.
404 Wyman Street
Waltham, MA 02154

By: North Bridge Venture Management III, L.P., its General Partner

By: /s/ Edward T. Anderson

Name:
Title:

Matrix Partners V, L.P.
Bay Colony Corporate Center
1000 Winter Street, Suite 4500
Waltham, MA 02154

By: Matrix V Management Co., LLC, its General Partner

By: Paul J. Ferri

Name:
Title:

Charles River Partnership VIII, A Limited Partnership
1000 Winter Street, Suite 3300
Waltham, MA 02154

By: Charles River VIII GP Limited Partnership, its General Partner

By: /s/ Richard M. Burnes

Richard M. Burnes
General Partner

Charles River VIII-A LLC
1000 Winter Street, Suite 3300
Waltham, MA 02154

By: Charles River Friends VII, Inc., its Manager

By: /s/ Richard M. Burnes

Name:
Title: Officer

Bessemer Venture Partners IV L.P.
Suite 407
1400 Old Country Road
Westbury, NY 11590

By: Deer IV & Co. LLC, General Partner

By: /s/ Robert H. Buescher

Name: Robert H. Buescher
Title: Manager

Bessec Ventures IV L.P.
c/o Bessemer Venture Partners
1400 Old Country Road
Suite 407
Westbury, NY 11590

By: Deer IV & Co. LLC, its General Partner

By: /s/ Robert H. Buescher

Name: Robert H. Buescher
Title: Manager

Bedrock Capital Partners I, L.P.
c/o Volpe Brown Whelan & Company LLC
One Boston Place
Suite 3310
Boston, MA 02108

By: Bedrock General Partner I, LLC, General Partner

By: /s/ David J. Duval

Name: David J. Duval
Title: Managing Member

VBW Employee Bedrock Fund, L.P.
c/o Volpe Brown Whelan & Company LLC
One Boston Place
Suite 3310
Boston, MA 02108

By: Bedrock General Partner I, LLC, General Partner

By: /s/ David J. Duval

Name: David J. Duval
Title: Managing Member

Credit Suisse First Boston Bedrock Fund, L.P.
c/o Volpe Brown Whelan & Company LLC
One Boston Place
Suite 3310
Boston, MA 02108

By: Bedrock General Partner I, LLC
Title: Attorney-in-Fact

By: /s/ David J. Duval

Name: David J. Duval
Title: Managing Member

/s/ Thomas S. Volpe
- ---
Thomas S. Volpe
c/o Volpe Brown Whelan & Company LLC
One Maritime Plaza
San Francisco, CA 94111

/s/ James Dolce Jr.
- ---
James Dolce
9 Stonegate Road
Hopkinton, MA 01748

- ---
Derek James
960 Crescent Beach Road
Vero Beach, FL 32963

- ---
Rubin Gruber
709 Sudbury Road
Concord, MA 01742

/s/ David L. Engel
- ---
David L. Engel
45 Juniper Road
Belmont, MA 02178

/s/ ILLEGIBLE
- ---
David Rokoff
30 Greylock Road
Wellesley, MA 02481

- ----------
Robert G. Gallager
3 Hawthorne Lane
Gloucester, MA 01930

/s/ Barry Ross
- ----------
Barry Ross
33 Ash Street
Weston, MA 02193

- ----------
Anthony S. Acampora
6473 Avenida Cresta
La Jolla, CA 92037

/s/ Howard Anderson
- ----------
Howard Anderson
65 Commonwealth Avenue
Boston, MA 02166

/s/ Carol Anderson
- ----------
Carol Anderson
65 Commonwealth Avenue
Boston, MA 02166

Telinnovation General Partnership
c/o Charles Davis
415 Clyde Avenue
Mountain View, CA 94043

By: [ILLEGIBLE]

Title: General Partner

By: /s/ David Shvarts

    Name: David Shvarts
    Title: GP

/s/ Harris Fishman
- ----------
Harris Fishman
271 Canton Street
Stoughton, MA 02072

/s/ Frank Winiarski
- ----------
Frank Winiarski
c/o Sonus Networks
5 Carlisle Road
Westford, MA 01886

/s/ Sheryl R. Schultz
- ----------
Sheryl R. Schultz
220 N. Main Street
Suite 102
Natick, MA 01760

SONUS NETWORKS, INC.

SERIES C PREFERRED STOCK PURCHASE AGREEMENT

September 10, 1999

SONUS NETWORKS, INC.

SERIES C PREFERRED STOCK
PURCHASE AGREEMENT

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SERIES C PREFERRED STOCK PURCHASE AGREEMENT

This Series C Preferred Stock Purchase Agreement (this "Agreement"), dated as of September 10, 1999, is entered into by and among Sonus Networks, Inc., a Delaware corporation (the "Company"), and the persons and entities listed on Schedule I attached hereto (individually, a "Purchaser" and, collectively, the "Purchasers").

In consideration of the mutual promises and covenants contained in this Agreement, the parties hereto agree as follows:

1. Authorization and Sale of Shares.

1.1 Authorization. The Company has duly authorized the sale and issuance, pursuant to the terms of this Agreement, of 2,153,072 shares of its Series C Convertible Preferred Stock, $0.01 par value per share (the "Series C Preferred Stock"), having the rights, restrictions, privileges and preferences set forth in the Second Amended and Restated Certificate of Incorporation of the Company attached hereto as Exhibit A (the "Restated Certificate"). The Company has adopted and filed the Restated Certificate with the Secretary of State of the State of Delaware.

1.2 Sale of Shares. Subject to the terms and conditions of this Agreement the Company will issue and sell to each Purchaser, and each Purchaser will purchase, for a purchase price of $11.81 per share, such number of shares of Series C Preferred Stock as is set forth opposite such Purchaser's name on Schedule I attached hereto. The shares of Series C Preferred Stock being sold under this Agreement are referred to as the "Shares." The Company's agreement with each of the Purchasers is a separate agreement, and the sale of Shares to each of the Purchasers is a separate sale.

1.3 Use of Proceeds. The Company will use the proceeds from the sale of the Shares for working capital purposes, the purchase of fixed assets, the acquisition of other businesses and/or technologies and the repayment of certain indebtedness.

2. The Closing. (a) The closing (the "Closing") of the sale and purchase of the Shares under this Agreement shall take place at the offices of Bingham Dana LLP, 150 Federal Street, Boston, Massachusetts at 9:00 a.m. on the date of this Agreement, or at such other time, date and place as are mutually agreeable to the Company and the Purchasers. The date of the Closing is hereinafter referred to as the "Closing Date."

(b) At the Closing:

(i) the Company shall deliver to the Purchasers a certificate, as of the most recent practicable date, as to the corporate good standing of the Company issued by the Secretary of State of the State of Delaware;

(ii) the Company shall deliver to the Purchasers the Restated Certificate of Incorporation, as in effect as of the Closing Date, certified by the Secretary of State of the State of Delaware;

(iii) the Company shall deliver to the Purchasers a Certificate of the Secretary of the Company attesting to (i) the By-laws of the Company, and (ii) resolutions of the Board of Directors of the Company authorizing and approving all matters in connection with this Agreement and the transactions contemplated hereby;

(iv) Bingham Dana LLP, counsel for the Company, shall deliver to the Purchasers an opinion, dated the Closing Date, in the form attached hereto as Exhibit B;

(v) the Company and the Purchasers shall execute and deliver the Second Amended and Restated Investor Rights Agreement in the form attached hereto as Exhibit C (the "Investor Agreement");

(vi) the Company, the Purchasers and the other parties thereto shall execute and deliver the Second Amended and Restated Right of First Refusal and Co-Sale Agreement in the form attached hereto as Exhibit D (the "Right of First Refusal Agreement");

(vii) the Company shall deliver to each Purchaser a certificate for the number of Shares being purchased by such Purchaser, registered in the name of such Purchaser;

(viii) each Purchaser shall pay to the Company the purchase price for the Shares being purchased by such Purchaser, by wire transfer or certified check; and

(ix) the Company and each of the Purchasers shall execute and deliver a cross-receipt.

(c) The Company will have the right, for a period of 90 days following the Closing Date, to issue and sell to one or more persons, as approved by the Company's Board of Directors, up to 423,370 additional shares of Series C Preferred Stock on the same terms and conditions as set forth in this Agreement. Such issuance and sale will be effected, if at all, by the execution and delivery by the purchaser of such shares of an Instrument of Adherence to this Agreement, the Investor Agreement, and the Right of First Refusal Agreement, respectively, which will have the effect of amending this

Agreement to add such purchaser as an additional "Purchaser" party hereto, amending the Investor Agreement to add such purchaser as an additional "New Purchaser" party thereto, and amending the Right of First Refusal Agreement to add such purchaser as an additional "New Purchaser" party thereto, and such amendments and the issuance and sale of such additional shares will for all purposes be deemed to have occurred as of the Closing Date.

3. Representations of the Company. The Company hereby represents and warrants to the Purchasers as follows, subject in each case to such exceptions as are specifically contemplated by this Agreement or as are set forth in the Disclosure Schedule attached hereto (the "Disclosure Schedule"). Notwithstanding any other provision of this Agreement or the Disclosure Schedule, each exception set forth in the Disclosure Schedule will be deemed to qualify each representation and warranty set forth in this Agreement that is specifically identified (by cross-reference or otherwise) in the Disclosure Schedule as being qualified by such exception.

3.1 Organization and Standing. The Company is a corporation duly organized, validly existing and in good standing under the laws of the State of Delaware and has full corporate power and authority to conduct its business as presently conducted and as proposed to be conducted by it and to enter into and perform this Agreement and to carry out the transactions contemplated by this Agreement. The Company is duly qualified to do business as a foreign corporation and is in good standing in the Commonwealth of Massachusetts and in any other jurisdiction in which the failure to so qualify would have a material adverse effect on the operations or financial condition of the Company. The Company has furnished to special counsel to the Purchasers true and complete copies of its Restated Certificate and By-laws, each as amended to date and presently in effect.

3.2 Capitalization. The authorized capital stock of the Company (immediately prior to the Closing) consists of (a) 15,000,000 shares of preferred stock, $0.01 par value per share (of which 7,220,000 shares have been designated as Series A Convertible Preferred Stock (the "Series A Preferred Stock"), 3,247,857 shares have been designated as Series B Convertible Preferred Stock (the "Series B Preferred Stock"), and 2,153,072 shares have been designated as Series C Convertible Preferred Stock), of which 7,180,000 shares of Series A Preferred Stock, 3,204,287 shares of Series B Preferred Stock, and no shares of Series C Preferred Stock are issued or outstanding and (b) 25,000,000 shares of common stock, $0.001 par value per share (the "Common Stock"), of which (i) 3,317,093 shares are issued and outstanding other than those under the Company's Amended and Restated 1997 Stock Incentive Plan (the "Plan"), (ii) 5,250,000 shares had been reserved for issuance pursuant to the Plan, of which the Company has issued or committed to issue not more than an aggregate of 5,479,800 shares (which issuances will require an amendment increasing the number of shares issuable under the Plan) in the form of restricted shares of Common Stock or stock options exercised or exercisable for shares of Common Stock pursuant to the terms of

such Plan, and (iii) 12,584,707 shares have been reserved for issuance upon the conversion of the Shares, shares of Series A Preferred Stock and shares of Series B Preferred Stock. At the Closing, the Common Stock, the Series A Preferred Stock, the Series B Preferred Stock, and the Series C Preferred Stock will have the voting powers, designations, preferences, rights and qualifications, and limitations or restrictions set forth in the Restated Certificate. All of the issued and outstanding shares of Common Stock have been duly authorized and validly issued and are fully paid and nonassessable. Except for the Series A Preferred Stock or Series B Preferred Stock or as set forth in Section 3.2 of the Disclosure Schedule or as contemplated by this Agreement, (i) no subscription, warrant, option, convertible security or other right (contingent or otherwise) to purchase or acquire any shares of capital stock of the Company is authorized or outstanding, (ii) the Company has no obligation (contingent or otherwise) to issue any subscription, warrant, option, convertible security or other such right or to issue or distribute to holders of any shares of its capital stock any evidences of indebtedness or assets of the Company, and (iii) the Company has no obligation (contingent or otherwise) to purchase, redeem or otherwise acquire any shares of its capital stock or any interest therein or to pay any dividend or make any other distribution in respect thereof. All of the issued and outstanding shares of capital stock of the Company have been offered, issued and sold by the Company in compliance in all material respects with applicable Federal and state securities laws.

3.3 Subsidiaries, Etc. The Company has no subsidiaries and does not own or control, directly or indirectly, any shares of capital stock of any other corporation or any interest in any partnership, joint venture or other non-corporate business enterprise.

3.4 Issuance of Shares; Agreements. The issuance, sale and delivery of the Shares in accordance with this Agreement, and the issuance and delivery of the shares of Common Stock issuable upon conversion of the Shares, have been duly authorized by all necessary corporate action on the part of the Company, and all such shares have been duly reserved for issuance. The Shares when so issued, sold and delivered against payment therefor in accordance with the provisions of this Agreement, and the shares of Common Stock issuable upon conversion of the Shares, when issued upon such conversion, will be duly and validly issued, fully paid and non-assessable. Except as set forth in Section 3.4 of the Disclosure Schedule or as contemplated by this Agreement, there are no agreements, written or oral, between the Company and any holder of its capital stock, or, to the best of the Company's knowledge, among any holders of its capital stock, relating to the acquisition (including without limitation rights of first refusal or pre-emptive rights), disposition, registration under the Securities Act of 1933, as amended (the "Securities Act")), or voting of the capital stock of the Company.

3.5 Authority for Agreement. The execution, delivery and performance by the Company of this Agreement and all other agreements required to be executed by the Company at the Closing pursuant to Section 2 (the "Ancillary

Agreements"), and the consummation by the Company of the transactions contemplated hereby and thereby, have been duly authorized by all necessary corporate action. This Agreement and the Ancillary Agreements have been, or as of the Closing will have been, duly executed and delivered by the Company and constitute, or as of the Closing will constitute, valid and binding obligations of the Company enforceable in accordance with their respective terms. Except as set forth in Section 3.5 of the Disclosure Schedule, the execution of and performance of the transactions contemplated by this Agreement and the Ancillary Agreements and compliance with their provisions by the Company will not violate any provision of applicable law and will not conflict with or result in any breach of any of the terms, conditions or provisions of, or constitute a default under, or require a consent or waiver under, its Restated Certificate or By-laws (each as amended to date) or any material indenture, lease, agreement or other instrument to which the Company is a party or by which it or any of its properties is bound, or any decree, judgment, order, statute, rule or regulation applicable to the Company which would have a material adverse effect on the business, properties or results of operations of the Company (a "Material Adverse Effect").

3.6 Governmental Consents. Except as set forth in Section 3.6 of the Disclosure Schedule, no consent, approval, order or authorization of, or registration, qualification, designation, declaration or filing with, any governmental authority is required on the part of the Company in connection with the execution and delivery of this Agreement, the offer, issuance, sale and delivery of the Shares, or the other transactions to be consummated at the Closing, as contemplated by this Agreement, other than such filings as shall have been made prior to and shall be effective on and as of the Closing. Based on the representations made by the Purchasers in Section 4 of this Agreement, the offer and sale of the Shares to the Purchasers will be exempt from the registration requirements of applicable Federal and state securities laws.

3.7 Litigation. Except as set forth in Section 3.7 of Disclosure Schedule, there is no action, suit or proceeding, or governmental inquiry or investigation, pending, or, to the best of the Company's knowledge, any basis therefor or threat thereof, against the Company, which questions the validity of this Agreement or the right of the Company to enter into it, or which might result, either individually or in the aggregate, in any material adverse change in the business, assets or condition, financial or otherwise, of the Company, nor is there any litigation pending, or, to the best of the Company's knowledge, any basis therefor or threat thereof, against the Company by reason of the activities of the Company, or negotiations by the Company with possible investors in the Company.

3.8 Financial Statements. The Company has delivered to the Purchasers copies of (i) its audited balance sheet as of December 31, 1998, and the related audited statements of operations, stockholders' equity, and cash flows for the fiscal year then ended and the period from inception (August 7, 1997) to December 31, 1998, as audited by Arthur Andersen LLP, together with the report of Arthur Andersen

LLP thereon, and (ii) its unaudited balance sheet as of June 30, 1999 (the "Most Recent Balance Sheet"), and the related unaudited statements of operations, stockholders' equity, and cash flows for the six (6) month period then ended and the period from inception (August 7, 1997) to June 30, 1999 (the "Interim Financials"). Each of such balance sheets fairly presents, in all material respects, the financial condition of the Company as of its respective date, and each of such statements of operations, stockholders' equity, and cash flows fairly presents, in all material respects, the results of operations, stockholders' equity, or cash flows, as the case may be, of the Company for the period covered thereby; in each case in accordance with generally accepted accounting principles, subject, in the case of Interim Financials, to the absence of footnotes and normal year-end adjustments.

3.9 Absence of Certain Changes. Since the date of the Most Recent Balance Sheet, there have not been any changes in the business, assets, financial condition, or operating results of the Company that, either individually or in the aggregate, have had a Material Adverse Effect (as defined in Section 3.5 hereof).

3.10 Taxes. The Company has filed all tax returns required to be filed by it on or prior to the date hereof, each such tax return has been prepared in compliance with all applicable laws and regulations, and, to the best of the Company's knowledge, all such tax returns are true and accurate in all material respects. All taxes due and payable by the Company with respect to any periods ending on or before the Closing Date have been paid. No claim has ever been made by a taxing authority in a jurisdiction where the Company does not pay tax or file tax returns that the Company is or may be subject to taxes assessed by such jurisdiction. There are no liens for taxes (other than current taxes not yet due and payable) on the assets of the Company. No action, suit, taxing authority proceeding, or audit with respect to any tax is pending or, to the best of the Company's knowledge, threatened, against or with respect to the Company. No deficiency or proposed adjustment in respect of taxes that has not been settled or otherwise resolved has been asserted or assessed by any taxing authority against the Company. The Company has withheld and paid all taxes required to have been withheld and paid by it in connection with amounts paid or owing to any employee, creditor, independent contractor, or other person. Neither the Company nor any of its stockholders has ever filed (a) an election pursuant to Section 1362 of the Internal Revenue Code of 1986, as amended (the "Code"), that the Company be taxed as an S Corporation, or (b) consent pursuant to Section 341(f) of the Code relating to collapsible corporations.

3.11 Title to Properties. Except as set forth in Section 3.11 of the Disclosure Schedule, the Company has good and valid title to its properties and assets reflected in the Most Recent Balance Sheet or acquired by it since the date of the Most Recent Balance Sheet (other than properties and assets disposed of in the ordinary course of business since the date of the Most Recent Balance Sheet), and, except as set forth in Section 3.11 of the Disclosure Schedule, all such properties and assets are free and clear of mortgages, pledges, security interests, liens, charges, claims, restrictions and other encumbrances (including without limitation, easements and licenses), except for liens for

or current taxes not yet due and payable and minor imperfections of title, if any, not material in nature or amount and not materially detracting from the value or impairing the use of the property subject thereto or impairing the ability or operations of the Company, including without limitation, the ability of the Company to secure financing using such properties and assets as collateral. To the best of the Company's knowledge, there are no condemnation, environmental, zoning or other land use regulation proceedings, either instituted or planned to be instituted, which would adversely affect the use or operation of the Company's properties and assets for their intended uses and purposes, or the value of such properties, and the Company has not received notice of any special assessment proceedings which would affect such properties and assets.

3.12 Leasehold Interests. Each lease or agreement to which the Company is a party under which it is a lessee of any property, real or personal, is a valid and subsisting agreement, duly authorized and entered into by the Company, without any default of the Company thereunder and, to the best of the Company's knowledge, without any default thereunder of any other party thereto. No event has occurred and is continuing which, with due notice of lapse of time or both, would constitute a default or event of default by the Company under any such lease or agreement or, to the best of the Company's knowledge, by any other party thereto. The Company's possession of such property has not been disturbed and, to the best of the Company's knowledge, no claim has been asserted against the Company adverse to its rights in such leasehold interests.

3.13 Intellectual Property.

(a) To the best of the Company's knowledge, no third party has claimed or has reason to claim that any person employed by or affiliated with the Company, in connection with his or her employment by or affiliation with the Company, (i) has violated or is violating any of the terms or conditions of his or her employment, non-competition or non-disclosure agreement with such third party, (ii) has disclosed or is disclosing or has utilized or is utilizing any trade secret or proprietary information or documentation of such third party or (iii) has interfered or is interfering in the employment relationship between such third party and any of its present or former employees. No third party has requested information from the Company which suggests that such a claim might be contemplated. To the best of the Company's knowledge, no person employed by or affiliated with the Company has employed or proposes to employ any trade secret or any information or documentation proprietary to any former employer, and to the best of the Company's knowledge, no person employed by or affiliated with the Company has violated any confidential relationship which such person may have had with any third party, in connection with the development, manufacture or sale or any product or proposed product or the development or sale of any service or proposed service of the Company, and the Company has no reason to believe there will be any such employment or violation. To the best of the Company's knowledge, none of the execution or delivery of this Agreement, or the carrying on of business of the Company by any officer, director or key employee of the Company, or the conduct or proposed

conduct of the business of the Company, will conflict with or result in a breach of the terms, conditions or provisions of or constitute a default under any contract, covenant or instrument under which any such person is obligated which would have a Material Adverse Effect.

(b) Set forth in Section 3.13(b) of the Disclosure Schedule is a list of all domestic and foreign patents, patent rights, patent applications, trademarks, trademark applications, service marks, service mark applications, trade names and copyrights, and all applications for such which are currently in the process of being prepared, owned by or registered in the name of the Company, or of which the Company is a licensor or licensee or in which the Company has any right, and in each case a brief description of the nature of such right. Except as set forth in Section 3.13(b) of the Disclosure Schedule, the Company owns or possesses adequate licenses or other rights to use all patents, patent applications, trademarks, trademark applications, service marks, service mark applications, trade names, copyrights, manufacturing processes, formulae, trade secrets, customer lists and know-how (collectively, "Intellectual Property") necessary for the conduct of its business as conducted and as proposed to be conducted. Except as otherwise provided in Section 3.13(b) of the Disclosure Schedule, no claim is pending or, to the best of the Company's knowledge, threatened to the effect that the operations of the Company infringe upon or conflict with the asserted rights of any other person under any Intellectual Property, and, to the best of the Company's knowledge, there is no basis for any such claim (whether or not pending or threatened). No claim is pending or, to the best of the knowledge of the Company, threatened to the effect that any such Intellectual Property owned or licensed by the Company, or which the Company otherwise has the right to use, is invalid or unenforceable by the Company, and, to the best of the Company's knowledge, there is no basis for any such claim (whether or not pending or threatened). To the best of the Company's knowledge, all technical information developed by and belonging to the Company which has not been patented has been kept confidential. Except as set forth in Section 3.13(b) of the Disclosure Schedule, the Company has not granted or assigned to any other person or entity any right to manufacture, have manufactured, assemble or sell the products or proposed products or to provide the services or proposed services of the Company.

3.14 Material Contracts and Obligations. Except as contemplated by this Agreement or as listed in Section 3.14 of the Disclosure Schedule, the Company is not a party to any material agreement or commitment of any nature, including without limitation (a) any agreement which requires future expenditures by the Company in excess of $100,000, (b) any employment or consulting agreement, employee benefit, bonus, pension, profit-sharing, stock option, stock purchase or similar plan or arrangement, or distributor or sales representative agreement, (c) any agreement with any stockholder, officer or director of the Company, or any "affiliate" or "associate" of such persons (as such terms are defined in the rules and regulations promulgated under the Securities Act, including without limitation any agreement or other arrangement providing for the furnishing of services by, rental of real or personal property from, or

otherwise requiring payments to, any such person or entity or (d) any agreement relating to the intellectual property rights of the Company.

3.15 Compliance. The Company has, to its knowledge, in all material respects, complied with all laws, regulations and orders applicable to its present and proposed business and has all material permits and governmental licenses required thereby. There is no term or provision of any mortgage, indenture, contract, agreement or instrument to which the Company is a party or by which it is bound, or, to the best of the Company's knowledge, of any provision of any state or Federal judgment, decree, order, statute, rule or regulation applicable to or binding upon the Company, which materially adversely affects or, so far as the Company may now foresee, in the future is reasonably likely to materially adversely affect, the business, assets or condition, financial or otherwise, of the Company. To the best of the Company's knowledge, no employee of the Company is in violation of any term of any contract or covenant (either with the Company or with another entity) relating to employment, patents, proprietary information disclosure, non-competition or non-solicitation.

3.16 Employees.

(a) Each holder of Common Stock has executed and delivered to the Company a Stock Repurchase Agreement in substantially the form attached hereto as Exhibit E, and all of such agreements are in full force and effect.

(b) Each employee of the Company has executed and delivered to the Company a Noncompetition and Confidentiality Agreement covering a period of one year following the termination of such employee's employment with the Company, in substantially the form attached hereto as Exhibit F, and all of such agreements are in full force and effect.

(c) None of the employees of the Company is represented by any labor union, and there is no labor strike or other labor trouble pending with respect to the Company (including, without limitation, any organizational drive) or, to the best of the Company's knowledge, threatened.

3.17 ERISA.

(a) Except as set forth on Schedule 3.17 hereto, the Company does not maintain and has no obligation to make contributions to, any employee benefit plan (an "ERISA Plan") within the meaning of Section 3(3) of the United States Employee Retirement Income Security Act of 1974, as amended ("ERISA"), or any other retirement, profit sharing, stock option, stock bonus or employee benefit plan (a "Non-ERISA Plan"). The Company has heretofore delivered to the Purchasers true, correct and complete copies of each ERISA Plan and each Non-ERISA Plan. All such ERISA Plans and Non-ERISA Plans have been maintained and operated in all material respects in

accordance with all federal, state and local laws applicable to such plans, and the terms and conditions of the respective plan documents, except where the failure to so maintain or operate such ERISA Plans and Non-ERISA Plans would not have a Material Adverse Effect.

(b) No material liability to the United States Pension Benefit Guaranty Corporation ("PBGC"), or to any multi-employer pension plan within the meaning of section 3(35) of ERISA, or to any other governmental authority, pension or retirement board, or other agency, under any federal, state or local law, has been or is expected to be incurred by the Company with respect to any ERISA or Non-ERISA Plan. There has been no "reportable event" within the meaning of Section 4043(b) of ERISA with respect to any ERISA Plan, and no event or condition that presents a material risk of termination of any ERISA Plan by the PBGC.

(c) Full payment has been made of all material amounts that the Company is required under the terms of each ERISA Plan and Non-ERISA Plan, or pursuant to applicable federal, state or local law, to have paid as contributions to such ERISA Plan or Non-ERISA Plan as of the last day of the most recent fiscal year of such ERISA Plan or Non-ERISA Plan ended prior to the date hereof, and no accumulated funding deficiency (as defined in Section 302 of ERISA and Section 412 of the Code), whether or not waived, exists with respect to any ERISA Plan.

3.18 Books and Records. The minute books of the Company contain records of all meetings and other corporate actions of its stockholders and its Board of Directors and committees thereof, which are complete and accurate in all material respects. The stock ledger of the Company is complete and reflects all issuances, transfers, repurchases and cancellations of shares of capital stock of the Company.

3.19 U.S. Real Property Holding Corporation. The Company is not now and has never been a "United States Real Property Holding Corporation" as defined in Section 897(c)(2) of the Code and Section 1.897-2(b) of the Regulations promulgated by the Internal Revenue Service.

3.20 Disclosures. Neither this Agreement nor any Schedule or Exhibit hereto, nor any certificate or instrument furnished to the Purchasers at the Closing or as required by the terms of this Agreement, when read together, contains or will contain any untrue statement of a material fact or omits or will omit to state a material fact necessary in order to make the statements contained herein or therein, in light of the circumstances under which they were made, not misleading.

3.21 Year 2000 Compatibility. To the best of the Company's knowledge, all of the Company's material products (including products currently under development), if applicable, will record, store, process and calculate and present calendar dates falling on and after January 1, 2000, and will calculate any information dependent

on or relating to such dates in substantially the same manner and with substantially the same functionality, data integrity and performance as the products record, store, process, calculate and present calendar dates on or before December 31, 1999, or calculate any information dependent on or relating to such date (collectively "Year 2000 Compliant"). To the best of the Company's knowledge, all of the Company's material products will lose no material functionality with respect to the introduction of records containing dates falling on or after January 1, 2000. To the best of the Company's knowledge, all of the Company's internal computer systems, including without limitation, its accounting systems, are Year 2000 Compliant.

4. Representations of the Purchasers. Each Purchaser represents and warrants to the Company as follows:

4.1 Investment. Such Purchaser is acquiring the Shares, and the shares of Common Stock into which the Shares may be converted, for its or his own account for investment and not with a view to, or for sale in connection with, any distribution thereof, nor with any present intention of distributing or selling the same; and such Purchaser has no present or contemplated agreement, undertaking, arrangement, obligation, indebtedness or commitment providing for the disposition thereof. Such Purchaser acknowledges that the Shares are restricted securities as defined under the Securities Act and shall bear the legends set forth in Section 6.3 hereof.

4.2 Authority. Such Purchaser has full power and authority to enter into and to perform this Agreement in accordance with its terms. Such Purchaser represents that it has not been organized, reorganized or recapitalized specifically for the purpose of investing in the Company. This Agreement and the Ancillary Agreement to be executed by such Purchaser have been duly executed and delivered by such Purchaser and constitute valid and binding obligations of such Purchaser enforceable in accordance with their respective terms. The execution of and performance of the transactions contemplated by this Agreement and the Ancillary Agreements to be executed by such Purchaser and compliance with their provisions by such Purchaser will not violate any provision of law and will not conflict with or result in any breach of any of the terms, conditions or provisions of, or constitute a default under, or require a consent or waiver under, its organizational documents (each as amended to date) or any indenture, lease, agreement or other instrument to which the Purchaser is a party or by which it or any of its properties is bound, or any decree, judgment, order, statute, rule or regulation applicable to such Purchaser.

4.3 Experience. Such Purchaser has carefully reviewed the representations concerning the Company contained in this Agreement and has made detailed inquiry concerning the Company, its business and its personnel; the officers of the Company have made available to such Purchaser any and all written information which it has requested and have answered to such Purchaser's satisfaction all inquiries made by such Purchaser; and such Purchaser has sufficient knowledge and experience in

investing in companies similar to the Company so as to be able to evaluate the risks and merits of its investment in the Company and is able financially to bear the risks thereof, including a complete loss of its investment. Such Purchaser understands that an investment in the Company involves a high degree of risk in view of the fact that the Company is a start-up enterprise with minimal operating history, and there may never be an established market for the Company's capital stock.

4.4 Status. Such Purchaser is an "accredited investor" as that term is defined in Rule 501 of Regulation D promulgated under the Securities Act. Such Purchaser represents that its investment in Series C Preferred Stock will not violate any existing policy of its employer and that it has the authority to make such an investment.

5. Covenants of the Company.

5.1 Inspection. The Company shall permit each Purchaser (together with any of its affiliates) holding not less than 107,653 shares of Series C Stock at the relevant time (as adjusted for stock splits, stock dividends, recapitalizations and similar events), or any authorized representative thereof, to visit and inspect the properties of the Company, including its corporate and financial records, and to discuss its business and finances with officers of the Company, during normal business hours following reasonable notice and as often as may be reasonably requested, without interruption of the business of the Company and subject to the confidentiality obligations of Section 7.2 hereof.

5.2 Financial Statements and Other Information.

(a) So long as a Purchaser (together with any of its affiliates) holds at least 107,653 shares of Series C Preferred Stock (as adjusted for stock splits, stock dividends, recapitalizations and similar events), the Company shall deliver to such Purchaser:

(i) within 90 days after the end of each fiscal year of the Company, an audited balance sheet of the Company as at the end of such year, and audited statements of operations, stockholders' equity and cash flows of the Company for such year, certified by certified public accountants of established national reputation selected by the Company, and prepared in accordance with generally accepted accounting principles; and

(ii) within 45 days after the end of each fiscal quarter of the Company, an unaudited balance sheet of the Company as at the end of such quarter, and unaudited statements of operations and cash flows of the Company for such fiscal quarter and for the current fiscal year to the end of such fiscal quarter.

(b) So long as a Purchaser (together with any of its affiliates) holds at least 107,653 shares of Series C Preferred Stock (as adjusted for stock splits, stock dividends, recapitalizations and similar events), the Company shall deliver to such Purchaser:

(i) within 30 days after the end of each month, an unaudited balance sheet of the Company as at the end of such month and unaudited statements of operations and cash flows of the Company for such month and for the current fiscal year to the end of such month, setting forth in comparative form the Company's projected financial statements for the corresponding periods for the current fiscal year;

(ii) as soon as available, but in any event within 30 days after commencement of each new fiscal year, a budget, consisting of projected financial statements for such fiscal year; and

(iii) with reasonable promptness, such other notices, information and data with respect to the Company as the Company delivers to the holders of its Common Stock, and such other information and data as such Purchaser may from time to time reasonably request.

(c) The foregoing financial statements shall be prepared on a consolidated basis if the Company then has any subsidiaries. The financial statements delivered pursuant to clause (ii) of paragraph (a) and clause (i) of paragraph (b) shall be accompanied by a certificate of the chief financial officer of the Company stating that such statements have been prepared in accordance with generally accepted accounting principles consistently applied (except as noted) and fairly present, in all material respects, the financial condition and results of operations of the Company at the date thereof and for the periods covered thereby (subject, in the case of any such unaudited financial statements to the absence of footnotes and to year-end adjustments).

5.3 Material Changes and Litigation. The Company shall promptly notify the Purchasers of any material adverse change in the business, assets or condition, financial or otherwise, of the Company and of any litigation or governmental proceeding or investigation brought or, to the best of the Company's knowledge, threatened against the Company, or against Hassan Ahmed, Rubin Gruber, Michael G. Hluchyj or Kwok P. Wong (the "Founders") or any officer, director, key employee or principal stockholder of the Company materially adversely affecting or which, if adversely determined, would materially adversely affect the Company's business, prospects, assets or condition, financial or otherwise.

5.4 Insurance.

(a) The Company shall maintain for a period of at least three years from the procurement thereof, term life insurance upon the lives of each of the Founders, in the amount of $1,000,000, with the proceeds payable to the Company.

(b) The Company shall maintain in effect, policies of workers' compensation insurance and of insurance with respect to its properties and business, including, without limitation, insurance against loss, damage, fire, theft, public liability and other risks, which is adequate for the maintenance and preservation of the Company's properties and business.

5.5 Employee Agreements. The Company shall require all employees hereafter employed or engaged by the Company who are at or above the director level or other key employees to enter into a Noncompetition and Confidentiality Agreement covering a period of one year following the termination of such employee's employment with the Company, substantially in the form attached hereto as Exhibit F or in such other form as may be approved by the Board of Directors. The Company shall require all employees not covered by the foregoing sentence to enter into a Confidentiality Agreement substantially in the form attached hereto as Exhibit G or in such other form as may be approved by the Board of Directors.

5.6 Related Party Transactions. The Company shall not enter into any agreement with any stockholder, officer or director of the Company, or any "affiliate" or "associate" of such persons (as such terms are defined in the rules and regulations promulgated under the Securities Act), including without limitation any agreement or other arrangement providing for the furnishing of services by, rental of real or personal property from, or otherwise requiring payments to, any such person or entity, without the consent of at least a majority of the members of the Company's Board of Directors having no interest in such agreement or arrangement.

5.7 Reservation of Common Stock. The Company shall reserve and maintain a sufficient number of shares of Common Stock for issuance upon conversion of all of the outstanding Shares.

5.8 Termination of Covenants. The covenants of the Company contained in Sections 5.1 through 5.7 shall terminate, and be of no further force or effect, upon the closing of the Company's first offering of Common Stock to the public, resulting in net proceeds to the Company of at least $10,000,000, and at a price per share of at least $20.00 (as adjusted for stock splits, stock dividends, recapitalizations and similar events) or, at such time as the Purchasers (together with any affiliated entities to whom Shares have been transferred) own less than an aggregate of 107,653 shares of

Series C Preferred Stock (as adjusted for stock splits, stock dividends, recapitalizations and similar events).

5.9 Qualified Small Business Stock. The Company shall submit to its stockholders (including the Purchasers) and to the Internal Revenue Service any reports that may be required under Section 1202(d)(1)(C) of the Code and the Regulations promulgated thereunder. In addition, within ten days after a Purchaser's written request therefor, the Company shall deliver to such Purchaser a written statement indicating whether such Purchaser's interest in the Company constitutes "qualified small business stock" as defined in Section 1202(c) of the Code.

6. Transfer of Shares.

6.1 Restricted Shares. "Restricted Shares" means (i) the Shares, (ii) the shares of Common Stock issued or issuable upon conversion of the Shares, (iii) any shares of capital stock of the Company acquired by a Purchaser pursuant to the Investor Agreement or the Right of First Refusal Agreement, and (iv) any other shares of capital stock of the Company issued in respect of such shares (as a result of stock splits, stock dividends, reclassifications, recapitalizations, or similar events); provided, however, that shares of Common Stock which are Restricted Shares shall cease to be Restricted Shares (i) upon any sale pursuant to a registration statement under the Securities Act, or under Section 4(1) of the Securities Act or Rule 144 under the Securities Act, or (ii) at such time as they become eligible for sale under Rule 144(k) under the Securities Act.

6.2 Requirements for Transfer.

(a) Restricted Shares shall not be sold or transferred unless (1) either (i) they first shall have been registered under the Securities Act, or (ii) the Company first shall have been furnished with an opinion of legal counsel, reasonably satisfactory to the Company, to the effect that such sale or transfer is exempt from the registration requirements of the Securities Act and (2) such actions are in compliance with applicable state securities laws.

(b) Notwithstanding the foregoing, no registration or opinion of counsel shall be required for (i) a transfer by a Purchaser which is a partnership to a partner of such partnership or a retired partner of such partnership who retires after the date hereof, or to the estate of any such partner or retired partner, if the transferee agrees in writing to be subject to the terms of this Section 6 to the same extent as if he were an original Purchaser hereunder, or (ii) a transfer made in accordance with Rule 144 under the Securities Act.

6.3 Legend. Each certificate representing Restricted Shares shall bear a legend substantially in the following form:

"The shares represented by this certificate have not been registered under the Securities Act of 1933, as amended, and may not be offered, sold or otherwise transferred, pledged or hypothecated unless and until such shares are registered under such Act or an opinion of counsel satisfactory to the Company is obtained to the effect that such registration is not required."

The foregoing legend shall be removed from the certificates representing any Restricted Shares, at the request of the holder thereof, at such time as they become eligible for resale pursuant to Rule 144(k) under the Securities Act.

6.4 Rule 144A Information. The Company shall, at all times during which it is neither subject to the reporting requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), nor exempt from reporting pursuant to Rule 12g3-2(b) under the Exchange Act, upon the written request of a Purchaser, provide in writing to such Purchaser, and to any prospective transferee of any Restricted Shares of such Purchaser, the information concerning the Company described in Rule 144A(d)(4) under the Securities Act ("Rule 144A Information"). The Company also shall, upon the written request of a Purchaser, cooperate with and assist such Purchaser or any member of the National Association of Securities Dealers, Inc. PORTAL system in applying to designate and thereafter maintain the eligibility of the Restricted Shares for trading through PORTAL. The Company's obligations under this Section 6.4 shall at all times be contingent upon receipt from the prospective transferee of Restricted Shares of a written agreement to take all reasonable precautions to safeguard the Rule 144A Information from disclosure to anyone other than persons who will assist such transferee in evaluating the purchase of any Restricted Shares and to use such Rule 144A Information only for such evaluation purposes.

7. Miscellaneous.

7.1 Successors and Assigns. This Agreement, and the rights and obligations of each Purchaser hereunder, may be assigned by such Purchaser to any person or entity to which at least 107,653 Shares, as adjusted for stock splits, stock dividends, recapitalizations and similar events (or 100% of the Shares originally purchased hereunder by such Purchaser, if less than 107,653 Shares), are transferred by such Purchaser, and such transferee shall be deemed a "Purchaser" for purposes of this Agreement; provided that the transferee provides written notice of such assignment to the Company and agrees to be bound by the terms and conditions set forth herein.

7.2 Confidentiality. The Purchasers agree that they will keep confidential and will not disclose or divulge any confidential, proprietary or secret information which they may obtain from the Company pursuant to financial statements, reports and other materials submitted by the Company to the Purchasers pursuant to this Agreement or any rights granted hereunder, unless such information is known, or until such information becomes known, to the public; provided, however, that a Purchaser may

disclose such information (i) to its attorneys, accountants, consultants, and other professionals to the extent necessary to obtain their services in connection with its investment in the Company, (ii) to any prospective purchaser of any Shares from such Purchaser as long as such prospective purchaser agrees in writing to be bound by the provisions of this Section, or (iii) to any affiliate of such Purchaser or to a partner, shareholder or subsidiary of such Purchaser; subject to the agreement of such party to keep such information confidential as set forth herein. Each Purchaser agrees that it will not make, issue or release any public announcement, public statement or public acknowledgement of the dollar amount of any Purchaser's investment in Series C Preferred Stock, or who served as the lead investor in the Series C Preferred Stock financing.

7.3 Survival of Representations and Warranties. All agreements, representations and warranties contained herein shall survive the execution and delivery of this Agreement and the closing of the transactions contemplated hereby for a period of eighteen (18) months from the date hereof.

7.4 Expenses. The Company shall pay, at the Closing, the reasonable costs and expenses of Gibson, Dunn & Crutcher LLP, counsel to the Purchasers, not to exceed $15,000 in the aggregate, in connection with the preparation of this Agreement and the other agreements and documents contemplated hereby and the closing of the transactions contemplated hereby.

7.5 Notices. All notices, requests, consents, and other communications under this Agreement shall be in writing and shall be delivered by hand, sent via a reputable nationwide overnight courier service or mailed by first class certified or registered mail, return receipt requested, postage prepaid:

If to the Company, at Sonus Networks, Inc., 5 Carlisle Road, Westford, MA 01886, Attn: President, or at such other address or addresses as may have been furnished in writing by the Company to the Purchasers, with a copy to Bingham Dana LLP, 150 Federal Street, Boston, MA 02110, Attn: David L. Engel, Esq.

If to a Purchaser, at its address as set forth on Schedule I attached hereto, or at such other address or addresses as may have been furnished to the Company in writing by such Purchaser, with a copy to Gibson, Dunn & Crutcher LLP, Attn: William L. Hudson.

Notices provided in accordance with this Section 7.5 shall be deemed delivered upon personal delivery, one business day after being sent via a reputable nationwide overnight courier service, or five business days after deposit in the mail.

7.6 Brokers. The Company and the Purchasers each (i) represents and warrants to the other parties hereto that he, she or it has retained no finder or broker in connection with the transactions contemplated by this Agreement, and (ii) will indemnify

and save the other parties harmless from and against any and all claims, liabilities or obligations with respect to brokerage or finders' fees or commissions in connection with the transactions contemplated by this Agreement asserted by any person on the basis of any agreement, statement or representation alleged to have been made by such indemnifying party.

7.7 Entire Agreement. This Agreement and the Ancillary Agreements embody the entire agreement and understanding between the parties hereto with respect to the subject matter hereof and supersedes all prior agreements and understandings relating to such subject matter.

7.8 Amendments and Waivers. Except as otherwise expressly set forth in this Agreement, any term of this Agreement may be amended and the observance of any term of this Agreement may be waived (either generally or in a particular instance and either retroactively or prospectively), with the written consent of the Company and the holders of at least 66 2/3% of the shares of Common Stock issued or issuable upon conversion of the Shares. Any amendment or waiver effected in accordance with this Section 7.8 shall be binding upon each holder of any Shares (including shares of Common Stock into which such Shares have been converted) and each future holder of all such securities and the Company. No waivers of or exceptions to any term, condition or provision of this Agreement, in any one or more instances, shall be deemed to be, or construed as, a further or continuing waiver of any such term, condition or provision.

7.9 Counterparts. This Agreement may be executed in one or more counterparts, each of which shall be deemed to be an original, but all of which shall be one and the same document.

7.10 Section Headings. The section headings are for the convenience of the parties and in no way alter, modify, amend, limit, or restrict the contractual obligations of the parties.

7.11 Severability. The invalidity or unenforceability of any provision of this Agreement shall not affect the validity or enforceability of any other provision of this Agreement.

7.12 Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the State of Delaware.

[remainder of page intentionally left blank]

Executed as an instrument under seal as of the date first written above.

COMPANY:

SONUS NETWORKS, INC.

By: /s/ Hassan Ahmed

Hassan Ahmed
President

PURCHASERS:

Frontier Internet Ventures, Inc.
1154 East Arques Avenue
Sunnyvale, CA 94086

By: /s/ Jonathan Heiliger

Name: Jonathan Heiliger
Title: Senior Vice President

Nissho Iwai American Corporation
1211 Avenue of the Americas
New York, NY 10036

By: /s/ S. Kanaratani

Name: S. Gene Kanaratani
Title: General Manager

Nissho Electronics Corporation
3-1, Tsukiji 7-Chome, Chou-ku
Tokyo, 104-8444 Japan

By: /s/ A. Kato

Name: A. Kato
Title: Senior Managing Director

Castile Ventures
1050 Winter Street, Suite 1000
Waltham, MA 02451

By: /s/ Nina F. Saberi

Name: Nina F. Saberi
Title: General Partner

Korea Technology Banking Corp. Venture Capital
720 University Avenue, Suite 100
Palo Alto, CA 94301

By: /s/ J.W. Kim

Name: Jong-Wook Kim
Title: Senior Vice President

North Bridge Venture
Partners II, L.P.
950 Winter Street, Suite 4600
Waltham, MA 02451

By: North Bridge Venture
Management II, L.P.,
its General Partner

By: /s/ Edward T. Anderson

Edward T. Anderson
General Partner

North Bridge Venture
Partners III, L.P.
950 Winter Street, Suite 4600
Waltham, MA 02451

By: North Bridge Venture
Management III, L.P.,
its General Partner

By: /s/ Edward T. Anderson

Name: Edward T. Anderson
Title: General Partner

Matrix Partners V, L.P.
Bay Colony Corporate Center
1000 Winter Street, Suite 4500
Waltham, MA 02154

By: Matrix V Management Co., LLC,
its General Partner

By: /s/ Paul J. Ferri

Name:
Title:

Matrix V Entrepreneurs Fund, L.P.
Bay Colony Corporate Center
1000 Winter Street, Suite 4500
Waltham, MA 02154

By: Matrix V Management Co., LLC,
its General Partner

By: /s/ Paul J. Ferri

Name:
Title:

Charles River Partnership VIII,
A Limited Partnership
1000 Winter Street, Suite 3300
Waltham, MA 02154

By: Charles River VIII GP Limited
Partnership, its General Partner

By: /s/ Richard M. Burnes

Richard M. Burnes
General Partner

Charles River VIII-A LLC
1000 Winter Street, Suite 3300
Waltham, MA 02154

By: Charles River Friends VII,
Inc., its Manager

By: /s/ Richard M. Burnes

Name:
Title:

Bessemer Venture Partners IV L.P.
Suite 407
1400 Old Country Road
Westbury, NY 11590

By: Deer IV & Co. LLC, General Partner

By: /s/ Robert H. Buescher

Name: Robert H. Buescher
Title: Manager

Bessec Ventures IV L.P.
c/o Bessemer Venture Partners
1400 Old Country Road
Suite 407
Westbury, NY 11590

By: Deer IV & Co. LLC, its General Partner

By: /s/ Robert H. Buescher

Name: Robert H. Buescher
Title: Manager

Bedrock Capital Partners I, L.P.
c/o Volpe Brown Whelan & Company LLC
One Boston Place
Suite 3310
Boston, MA 02108

By: Bedrock General Partner I, LLC, General Partner

By: /s/ Paul W. Brown

Name: Paul W. Brown
Title: Managing Member

VBW Employee Bedrock Fund, L.P.
c/o Volpe Brown Whelan & Company LLC
One Boston Place
Suite 3310
Boston, MA 02108

By: Bedrock General Partner I, LLC, General Partner

By: /s/ Paul W. Brown

Name: Paul W. Brown
Title: Managing Member

Credit Suisse First Boston Bedrock Fund, L.P.
c/o Volpe Brown Whelan & Company LLC
Suite 3310
One Boston Street
Boston, MA 02108

By: Bedrock General Partner I, L.P.
Title: Attorney-in-Fact

By: /s/ Paul W. Brown

Name: Paul W. Brown
Title: Managing Member

/s/ Thomas S. Volpe

Thomas S. Volpe
c/o Volpe Brown Whelan & Company LLC
One Maritime Plaza
5th Floor
San Francisco, CA 94111

/s/ James A. Dolce

James Dolce
9 Stonegate Road
Hopkinton, MA 01748

Derek James
960 Crescent Beach Road
Vero Beach, FL 32963

/s/ David Engel

David L. Engel
45 Juniper Road
Belmont, MA 02178

/s/ David Rokoff

David Rokoff
30 Greylock Road
Wellesley, MA 02181

/s/ Robert G. Gallager

Robert G. Gallager
3 Hawthorne Lane
Gloucester, MA 01930

/s/ Barry Ross

Barry Ross
33 Ash Street
Weston, MA 02193

/s/ Howard Anderson

Howard Anderson
65 Commonwealth Avenue
Boston, MA 02166

/s/ Carol Anderson

Carol Anderson
65 Commonwealth Avenue
Boston, MA 02166

Telinnovation General Partnership
c/o Charles Davis
415 Clyde Avenue
Mountain View, CA 94043

By: /s/ Charles E. Dave, its

    General Partner

By: Charles E. Dave

    Name:
    Title: General Partner

/s/ Frank Winiarski

Frank Winiarski
c/o Sonus Networks
5 Carlisle Road
Westford, MA 01886

/s/ Sheryl Schultz

Sheryl R. Schultz
220 N. Main Street
Suite 102
Natick, MA 01760

/s/ Paul Johnson

Paul Johnson
1112 Park Avenue
Apartment 14B
New York, NY 10128-1235

/s/ Paul Severino

Paul Severino
680 Strawberry Hill Road
Concord, MA 01742

Cheng Wu
3 Coburn Road
Hopkington, MA 01748

/s/ Brian Hinman

Brian Hinman
37 Broadway
Los Gatos, CA 96030

/s/ Mark Pasculano

Mark Pasculano
44 Bridle Trail Road
Needham, MA 02492-1412

/s/ Jeff Pulver

Jeff Pulver
c/o Richard Stark
115 Broadhollow Road, Suite 225
Melville, NY 11747

/s/ Michael Walsh

Michael Walsh
115 Broadhollow Road, Suite 225
Melville, NY 11747

/s/ Steven Patterson

Steven Patterson
Techgenisis
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Braintree, MA 02184

/s/ Stephen R. Bullerjahn

Rid Bullerjahn
39 Grantland Road
Wellesley, MA 02481

/s/ Jonathan Art

Jonathan Art
80 East End Ave.
New York, NY 10028

/s/ Frances M. Jewels

Frances Jewels
Sycamore Networks
10 Elizabeth Drive
Chelmsford, MA 01824

/s/ Jules DeVigne

Jules DeVigne
3701 Clubland Drive
Marrietta, GA 30068

/s/ Ryker Young

Ryker Young
Sycamore Networks
10 Elizabeth Drive
Chelmsford, MA 01824

/s/ Daniel Smith

Daniel Smith
Sycamore Networks
10 Elizabeth Drive
Chelmsford, MA 01824

/s/ R.S. Cheheyl

R.S. Cheheyl
130 Lane's End
Concord, MA 01742

/s/ Desh Deshpande

Desh Deshpande
Sycamore Networks
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/s/ Therese Melden

Therese Melden
7 Jackstraw Path
Westborough, MA 01581

/s/ Laurence M. Harding

Larry Harding
70 Pond Street
Natick, MA 01760

/s/ Paul W. Shaneck

Paul Shaneck
176 Quakertown Road
Quakertown, NJ 08868

/s/ Peter Koss

Peter Koss
Sonus Networks, Inc.
Carlisle Road
Westford, MA 01886

/s/ Robert Marzi

Robert Marzi
Sonus Networks, Inc.
Carlisle Road
Westford, MA 01886

/s/ Gordon VanderBrug

Gordon VanderBrug
ibasis
22nd Avenue
Burlington, MA 01803

/s/ Ofer Gneezy

Ofer Gneezy
ibasis
22nd Avenue
Burlington, MA 01803

/s/ Lance B. Boxer

Lance Boxer
Lucent Technologies
184 Liberty Corner Road
Rm. 4WD-12C
Warren, NJ 07059

Exhibit 10.7

SONUS NETWORKS, INC.

SERIES D PREFERRED STOCK
PURCHASE AGREEMENT

March 9, 2000

SONUS NETWORKS, INC.

SERIES D PREFERRED STOCK
PURCHASE AGREEMENT

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SERIES D PREFERRED STOCK PURCHASE AGREEMENT

This Series D Preferred Stock Purchase Agreement (this "AGREEMENT"), dated as of March 9, 2000, is entered into by and among Sonus Networks, Inc., a Delaware corporation (the "COMPANY"), and the persons and entities listed on SCHEDULE I attached hereto (individually, a "PURCHASER" and, collectively, the "PURCHASERS").

In consideration of the mutual promises and covenants contained in this Agreement, the parties hereto agree as follows:

1. AUTHORIZATION AND SALE OF SHARES.

1.1 AUTHORIZATION. The Company has duly authorized the sale and issuance, pursuant to the terms of this Agreement, of up to 1,585,366 shares of its Series D Convertible Preferred Stock, $0.01 par value per share (the "SERIES D PREFERRED STOCK"), having the rights, restrictions, privileges and preferences set forth in the Third Amended and Restated Certificate of Incorporation of the Company attached hereto as EXHIBIT A (the "RESTATED CERTIFICATE"). The Company has adopted and filed the Restated Certificate with the Secretary of State of the State of Delaware.

1.2 SALE OF SHARES. Subject to the terms and conditions of this Agreement the Company will issue and sell to each Purchaser, and each Purchaser will purchase, for a purchase price of $16.40 per share, such number of shares of Series D Preferred Stock as is set forth opposite such Purchaser's name on SCHEDULE I attached hereto. The shares of Series D Preferred Stock being sold under this Agreement are referred to as the "SHARES." The Company's agreement with each of the Purchasers is a separate agreement, and the sale of Shares to each of the Purchasers is a separate sale.

1.3 USE OF PROCEEDS. The Company will use the proceeds from the sale of the Shares for working capital purposes, the purchase of fixed assets, the acquisition of other businesses and/or technologies and the repayment of certain indebtedness.

2. THE CLOSING. (a) The closing (the "CLOSING") of the sale and purchase of the Shares under this Agreement shall take place at the offices of Bingham Dana LLP, 150 Federal Street, Boston, Massachusetts at 9:00 a.m. on the date of this Agreement, or at such other time, date and place as are mutually agreeable to the Company and the Purchasers. The date of the Closing is hereinafter referred to as the "CLOSING DATE."

(b) At the Closing:

(i) the Company shall deliver to the Purchasers a certificate, as of the most recent practicable date, as to the corporate good standing of the Company issued by the Secretary of State of the State of Delaware;

(ii) the Company shall deliver to the Purchasers the Restated Certificate of Incorporation, as in effect as of the Closing Date, certified by the Secretary of State of the State of Delaware;

(iii) the Company shall deliver to the Purchasers a Certificate of the Secretary of the Company attesting to (i) the By-laws of the Company, and (ii) resolutions of the Board of Directors and the stockholders of the Company authorizing and approving all matters in connection with this Agreement and the transactions contemplated hereby;

(iv) Bingham Dana LLP, counsel for the Company, shall deliver to the Purchasers an opinion, dated the Closing Date, in the form attached hereto as EXHIBIT B;

(v) the Company and the Purchasers shall execute and deliver the Third Amended and Restated Investor Rights Agreement in the form attached hereto as EXHIBIT C (the "INVESTOR AGREEMENT");

(vi) the Company, the Purchasers and the other parties thereto shall execute and deliver the Third Amended and Restated Right of First Refusal and Co-Sale Agreement in the form attached hereto as EXHIBIT D (the "RIGHT OF FIRST REFUSAL AGREEMENT");

(vii) the Company shall deliver to each Purchaser a copy of a waiver of the pre-emptive rights of the holders of Series A, Series B and Series C Preferred Stock;

(viii) the Company shall deliver to each Purchaser a certificate for the number of Shares being purchased by such Purchaser, registered in the name of such Purchaser;

(ix) each Purchaser shall pay to the Company the purchase price for the Shares being purchased by such Purchaser, by wire transfer or certified check; and

(x) the Company and each of the Purchasers shall execute and deliver a cross-receipt.

3. REPRESENTATIONS OF THE COMPANY. The Company hereby represents and warrants to the Purchasers as follows, subject in each case to such exceptions as are

specifically contemplated by this Agreement or as are set forth in the Disclosure Schedule attached hereto (the "DISCLOSURE SCHEDULE"). Notwithstanding any other provision of this Agreement or the Disclosure Schedule, each exception set forth in the Disclosure Schedule will be deemed to qualify each representation and warranty set forth in this Agreement that is specifically identified (by cross-reference or otherwise) in the Disclosure Schedule as being qualified by such exception.

3.1 ORGANIZATION AND STANDING. The Company is a corporation duly organized, validly existing and in good standing under the laws of the State of Delaware and has full corporate power and authority to conduct its business as presently conducted and as proposed to be conducted by it and to enter into and perform this Agreement and to carry out the transactions contemplated by this Agreement. The Company is duly qualified to do business as a foreign corporation and is in good standing in the Commonwealth of Massachusetts and in any other jurisdiction in which the failure to so qualify would have a material adverse effect on the operations or financial condition of the Company. The Company has furnished to special counsel to the Purchasers true and complete copies of its Restated Certificate and By-laws, each as amended to date and presently in effect.

3.2 CAPITALIZATION. The authorized capital stock of the Company (immediately prior to the Closing) consists of (a) 17,000,000 shares of preferred stock, $0.01 par value per share (of which 7,220,000 shares have been designated as Series A Convertible Preferred Stock (the "SERIES A PREFERRED STOCK"), 3,247,857 shares have been designated as Series B Convertible Preferred Stock (the "SERIES B PREFERRED STOCK"), 2,153,072 shares have been designated as Series C Convertible Preferred Stock (the "SERIES C PREFERRED STOCk"), and 1,585,366 have been designated as Series D Convertible Preferred Stock, of which 7,180,000 shares of Series A Preferred Stock, 3,204,287 shares of Series B Preferred Stock, 1,939,681 shares of Series C Preferred Stock, and no shares of Series D Preferred Stock are issued or outstanding and (b) 70,000,000 shares of common stock, $0.001 par value per share (the "COMMON Stock"), of which (i) 8,292,731 shares are issued and outstanding other than those under the Company's Amended and Restated 1997 Stock Incentive Plan (as amended, the "PLAN"), (ii) 16,250,000 shares have been reserved for issuance pursuant to the Plan, of which the Company has issued or committed to issue not more than an aggregate of 15,759,922 shares in the form of restricted shares of Common Stock or stock options exercised or exercisable for shares of Common Stock pursuant to the terms of such Plan, and (iii) 30,809,920 shares have been reserved for issuance upon the conversion of the Shares, shares of Series A Preferred Stock, shares of Series B Preferred Stock, and shares of Series C Preferred Stock. At the Closing, the Common Stock, the Series A Preferred Stock, the Series B Preferred Stock, the Series C Preferred Stock and the Series D Preferred Stock will have the voting powers, designations, preferences, rights and qualifications, and limitations or restrictions set forth in the Restated Certificate. All of the issued and outstanding shares of Common Stock have been duly authorized and validly issued and are fully paid and nonassessable. Except for the Series A Preferred Stock, the Series B Preferred Stock or the Series C

Preferred Stock or as set forth in Section 3.2 of the Disclosure Schedule or as contemplated by this Agreement, (i) no subscription, warrant, option, convertible security or other right (contingent or otherwise) to purchase or acquire any shares of capital stock of the Company is authorized or outstanding, (ii) the Company has no obligation (contingent or otherwise) to issue any subscription, warrant, option, convertible security or other such right or to issue or distribute to holders of any shares of its capital stock any evidences of indebtedness or assets of the Company, and (iii) the Company has no obligation (contingent or otherwise) to purchase, redeem or otherwise acquire any shares of its capital stock or any interest therein or to pay any dividend or make any other distribution in respect thereof. All of the issued and outstanding shares of capital stock of the Company have been offered, issued and sold by the Company in compliance in all material respects with applicable Federal and state securities laws.

3.3 SUBSIDIARIES, ETC. Except as set forth in Section 3.3 of the Disclosure Schedule, the Company has no subsidiaries and does not own or control, directly or indirectly, any shares of capital stock of any other corporation or any interest in any partnership, joint venture or other non-corporate business enterprise.

3.4 ISSUANCE OF SHARES; AGREEMENTS. The issuance, sale and delivery of the Shares in accordance with this Agreement, and the issuance and delivery of the shares of Common Stock issuable upon conversion of the Shares, have been duly authorized by all necessary corporate action on the part of the Company, and all such shares have been duly reserved for issuance. The Shares when so issued, sold and delivered against payment therefor in accordance with the provisions of this Agreement, and the shares of Common Stock issuable upon conversion of the Shares, when issued upon such conversion, will be duly and validly issued, fully paid and non-assessable. Except as set forth in Section 3.4 of the Disclosure Schedule or as contemplated by this Agreement, there are no agreements, written or oral, between the Company and any holder of its capital stock, or, to the best of the Company's knowledge, among any holders of its capital stock, relating to the acquisition (including without limitation rights of first refusal or pre-emptive rights), disposition, registration under the Securities Act of 1933, as amended (the "SECURITIES ACT"), or voting of the capital stock of the Company.

3.5 AUTHORITY FOR AGREEMENT. The execution, delivery and performance by the Company of this Agreement and all other agreements required to be executed by the Company at the Closing pursuant to Section 2 (the "ANCILLARY AGREEMENTS"), and the consummation by the Company of the transactions contemplated hereby and thereby, have been duly authorized by all necessary corporate action. This Agreement and the Ancillary Agreements have been, or as of the Closing will have been, duly executed and delivered by the Company and constitute, or as of the Closing will constitute, valid and binding obligations of the Company enforceable in accordance with their respective terms. The execution of and performance of the transactions contemplated by this Agreement and the Ancillary Agreements and compliance with their provisions by the Company will not violate any provision of applicable law and will not

conflict with or result in any breach of any of the terms, conditions or provisions of, or constitute a default under, or require a consent or waiver under, its Restated Certificate or By-laws (each as amended to date) or any material indenture, lease, agreement or other instrument to which the Company is a party or by which it or any of its properties is bound, or any decree, judgment, order, statute, rule or regulation applicable to the Company which would have a material adverse effect on the business, properties or results of operations of the Company (a "MATERIAL ADVERSE EFFECT").

3.6 GOVERNMENTAL CONSENTS. No consent, approval, order or authorization of, or registration, qualification, designation, declaration or filing with, any governmental authority is required on the part of the Company in connection with the execution and delivery of this Agreement, the offer, issuance, sale and delivery of the Shares, or the other transactions to be consummated at the Closing, as contemplated by this Agreement, other than such filings as shall have been made prior to and shall be effective on and as of the Closing. Based on the representations made by the Purchasers in Section 4 of this Agreement, the offer and sale of the Shares to the Purchasers will be exempt from the registration requirements of applicable Federal and state securities laws.

3.7 LITIGATION. Except as set forth in Section 3.7 of Disclosure Schedule, there is no action, suit or proceeding, or governmental inquiry or investigation, pending, or, to the best of the Company's knowledge, any basis therefor or threat thereof, against the Company, which questions the validity of this Agreement or the right of the Company to enter into it, or which might result, either individually or in the aggregate, in any material adverse change in the business, assets or condition, financial or otherwise, of the Company, nor is there any litigation pending, or, to the best of the Company's knowledge, any basis therefor or threat thereof, against the Company by reason of the activities of the Company, or negotiations by the Company with possible investors in the Company.

3.8 FINANCIAL STATEMENTS. The Company has delivered to the Purchasers copies of (i) its unaudited balance sheet as of December 31, 1999, and the related unaudited statements of operations, redeemable convertible preferred stock and stockholders' deficit, and cash flows for the fiscal year then ended and for the period from inception (August 7, 1997) to December 31, 1999, and (ii) its unaudited balance sheet as of January 31, 2000 (the "MOST RECENT BALANCE SHEET"), and the related unaudited statements of operations, redeemable convertible stock and stockholders' deficit, and cash flows for the one (1) month period then ended and for the period from inception (August 7, 1997) to January 31, 2000 (the "INTERIM FINANCIALS"). Except as set forth in Section 3.8 of the Disclosure Schedule, each of such balance sheets fairly presents, in all material respects, the financial condition of the Company as of its respective date, and each of such statements of operations, redeemable convertible preferred stock and stockholders' deficit, and cash flows fairly presents, in all material respects, the results of operations, redeemable convertible preferred stock and stockholders' deficit, or cash flows, as the case may be, of the Company for the period

covered thereby; in each case in accordance with generally accepted accounting principles, subject to the absence of footnotes and normal year-end adjustments.

3.9 ABSENCE OF CERTAIN CHANGES. Except as set forth in Section 3.9 of the Disclosure Schedule, since the date of the Most Recent Balance Sheet, there have not been any changes in the business, assets, financial condition, or operating results of the Company that, either individually or in the aggregate, have had a Material Adverse Effect (as defined in Section 3.5 hereof).

3.10 TAXES. The Company has filed all tax returns required to be filed by it on or prior to the date hereof, each such tax return has been prepared in compliance with all applicable laws and regulations, and, to the best of the Company's knowledge, all such tax returns are true and accurate in all material respects. All taxes due and payable by the Company with respect to any periods ending on or before the Closing Date have been paid. No claim has ever been made by a taxing authority in a jurisdiction where the Company does not pay tax or file tax returns that the Company is or may be subject to taxes assessed by such jurisdiction. There are no liens for taxes (other than current taxes not yet due and payable) on the assets of the Company. No action, suit, taxing authority proceeding, or audit with respect to any tax is pending or, to the best of the Company's knowledge, threatened, against or with respect to the Company. No deficiency or proposed adjustment in respect of taxes that has not been settled or otherwise resolved has been asserted or assessed by any taxing authority against the Company. The Company has withheld and paid all taxes required to have been withheld and paid by it in connection with amounts paid or owing to any employee, creditor, independent contractor, or other person. Neither the Company nor any of its stockholders has ever filed (a) an election pursuant to Section 1362 of the Internal Revenue Code of 1986, as amended (the "CODE"), that the Company be taxed as an S Corporation, or (b) consent pursuant to Section 341(f) of the Code relating to collapsible corporations.

3.11 TITLE TO PROPERTIES. Except as set forth in Section 3.11 of the Disclosure Schedule, the Company has good and valid title to its properties and assets reflected in the Most Recent Balance Sheet or acquired by it since the date of the Most Recent Balance Sheet (other than properties and assets disposed of in the ordinary course of business since the date of the Most Recent Balance Sheet), and, except as set forth in Section 3.11 of the Disclosure Schedule, all such properties and assets are free and clear of mortgages, pledges, security interests, liens, charges, claims, restrictions and other encumbrances (including without limitation, easements and licenses), except for liens for current taxes not yet due and payable and minor imperfections of title, if any, not material in nature or amount and not materially detracting from the value or impairing the use of the property subject thereto or impairing the ability or operations of the Company, including without limitation, the ability of the Company to secure financing using such properties and assets as collateral. To the best of the Company's knowledge, there are no condemnation, environmental, zoning or other land use regulation proceedings, either instituted or planned to be instituted, which would adversely affect the use or operation of

the Company's properties and assets for their intended uses and purposes, or the value of such properties, and the Company has not received notice of any special assessment proceedings which would affect such properties and assets.

3.12 LEASEHOLD INTERESTS. Each lease or agreement to which the Company is a party under which it is a lessee of any property, real or personal, is a valid and subsisting agreement, duly authorized and entered into by the Company, without any default of the Company thereunder and, to the best of the Company's knowledge, without any default thereunder of any other party thereto. No event has occurred and is continuing which, with due notice of lapse of time or both, would constitute a default or event of default by the Company under any such lease or agreement or, to the best of the Company's knowledge, by any other party thereto. The Company's possession of such property has not been disturbed and, to the best of the Company's knowledge, no claim has been asserted against the Company adverse to its rights in such leasehold interests.

3.13 INTELLECTUAL PROPERTY.

(a) To the best of the Company's knowledge, except as set forth in Section 3.13(a) of the Disclosure Schedule, no third party has claimed or has reason to claim that any person employed by or affiliated with the Company, in connection with his or her employment by or affiliation with the Company, (i) has violated or is violating any of the terms or conditions of his or her employment, non-competition or non-disclosure agreement with such third party, (ii) has disclosed or is disclosing or has utilized or is utilizing any trade secret or proprietary information or documentation of such third party or (iii) has interfered or is interfering in the employment relationship between such third party and any of its present or former employees. Except as set forth in Section 3.13(a) of the Disclosure Schedule, no third party has requested information from the Company which suggests that such a claim might be contemplated. To the best of the Company's knowledge, no person employed by or affiliated with the Company has employed or proposes to employ any trade secret or any information or documentation proprietary to any former employer, and to the best of the Company's knowledge, no person employed by or affiliated with the Company has violated any confidential relationship which such person may have had with any third party, in connection with the development, manufacture or sale or any product or proposed product or the development or sale of any service or proposed service of the Company, and the Company has no reason to believe there will be any such employment or violation. To the best of the Company's knowledge, none of the execution or delivery of this Agreement, or the carrying on of business of the Company by any officer, director or key employee of the Company, or the conduct or proposed conduct of the business of the Company, will conflict with or result in a breach of the terms, conditions or provisions of or constitute a default under any contract, covenant or instrument under which any such person is obligated which would have a Material Adverse Effect.

(b) Set forth in Section 3.13(b) of the Disclosure Schedule is a list of all domestic and foreign patents, patent rights, patent applications, trademarks, trademark applications, service marks, service mark applications, trade names and copyrights, and all applications for such which are currently in the process of being prepared, owned by or registered in the name of the Company, or of which the Company is a licensor or licensee or in which the Company has any right, and in each case a brief description of the nature of such right. Except as set forth in Section 3.13(b) of the Disclosure Schedule, the Company owns or possesses adequate licenses or other rights to use all patents, patent applications, trademarks, trademark applications, service marks, service mark applications, trade names, copyrights, manufacturing processes, formulae, trade secrets, customer lists and know-how (collectively, "INTELLECTUAL PROPERTY") necessary for the conduct of its business as conducted and as proposed to be conducted. Except as otherwise provided in Section 3.13(b) of the Disclosure Schedule, no claim is pending or, to the best of the Company's knowledge, threatened to the effect that the operations of the Company infringe upon or conflict with the asserted rights of any other person under any Intellectual Property, and, to the best of the Company's knowledge, there is no basis for any such claim (whether or not pending or threatened). No claim is pending or, to the best of the knowledge of the Company, threatened to the effect that any such Intellectual Property owned or licensed by the Company, or which the Company otherwise has the right to use, is invalid or unenforceable by the Company, and, to the best of the Company's knowledge, there is no basis for any such claim (whether or not pending or threatened). To the best of the Company's knowledge, all technical information developed by and belonging to the Company which has not been patented has been kept confidential. Except as set forth in Section 3.13(b) of the Disclosure Schedule, the Company has not granted or assigned to any other person or entity any right to manufacture, have manufactured, assemble or sell the products or proposed products or to provide the services or proposed services of the Company.

3.14 MATERIAL CONTRACTS AND OBLIGATIONS. Except as contemplated by this Agreement or as listed in Section 3.14 of the Disclosure Schedule, the Company is not a party to any material agreement or commitment of any nature, including without limitation (a) any agreement which requires future expenditures by the Company in excess of $100,000, (b) any employment or consulting agreement, employee benefit, bonus, pension, profit-sharing, stock option, stock purchase or similar plan or arrangement, or distributor or sales representative agreement, (c) any agreement with any stockholder, officer or director of the Company, or any "affiliate" or "associate" of such persons (as such terms are defined in the rules and regulations promulgated under the Securities Act), including without limitation any agreement or other arrangement providing for the furnishing of services by, rental of real or personal property from, or otherwise requiring payments to, any such person or entity or (d) any agreement relating to the intellectual property rights of the Company.

3.15 COMPLIANCE. Except as set forth in Section 3.15 of the Disclosure Schedule, the Company has, to its knowledge, in all material respects, complied with all

laws, regulations and orders applicable to its present and proposed business and has all material permits and governmental licenses required thereby. There is no term or provision of any mortgage, indenture, contract, agreement or instrument to which the Company is a party or by which it is bound, or, to the best of the Company's knowledge, of any provision of any state or Federal judgment, decree, order, statute, rule or regulation applicable to or binding upon the Company, which materially adversely affects or, so far as the Company may now foresee, in the future is reasonably likely to materially adversely affect, the business, assets or condition, financial or otherwise, of the Company. Except as set forth in Section 3.15 of the Disclosure Schedule, to the best of the Company's knowledge, no employee of the Company is in violation of any term of any contract or covenant (either with the Company or with another entity) relating to employment, patents, proprietary information disclosure, non-competition or non-solicitation.

3.16 EMPLOYEES.

(a) Each holder of Common Stock has executed and delivered to the Company a Stock Repurchase Agreement in substantially the form attached hereto as EXHIBIT E, and all of such agreements are in full force and effect.

(b) Each employee of the Company has executed and delivered to the Company a Noncompetition and Confidentiality Agreement covering a period of one year following the termination of such employee's employment with the Company, in substantially the form attached hereto as EXHIBIT F, and all of such agreements are in full force and effect.

(c) None of the employees of the Company is represented by any labor union, and there is no labor strike or other labor trouble pending with respect to the Company (including, without limitation, any organizational drive) or, to the best of the Company's knowledge, threatened.

3.17 ERISA.

(a) Except as set forth on SCHEDULE 3.17 hereto, the Company does not maintain and has no obligation to make contributions to, any employee benefit plan (an "ERISA PLAN") within the meaning of Section 3(3) of the United States Employee Retirement Income Security Act of 1974, as amended ("ERISA"), or any other retirement, profit sharing, stock option, stock bonus or employee benefit plan (a "NON-ERISA PLAN"). All such ERISA Plans and Non-ERISA Plans have been maintained and operated in all material respects in accordance with all federal, state and local laws applicable to such plans, and the terms and conditions of the respective plan documents, except where the failure to so maintain or operate such ERISA Plans and Non-ERISA Plans would not have a Material Adverse Effect.

(b) No material liability to the United States Pension Benefit Guaranty Corporation ("PBGC"), or to any multi-employer pension plan within the meaning of section 3(35) of ERISA, or to any other governmental authority, pension or retirement board, or other agency, under any federal, state or local law, has been or is expected to be incurred by the Company with respect to any ERISA or Non-ERISA Plan. There has been no "reportable event" within the meaning of Section 4043(b) of ERISA with respect to any ERISA Plan, and no event or condition that presents a material risk of termination of any ERISA Plan by the PBGC.

(c) Full payment has been made of all material amounts that the Company is required under the terms of each ERISA Plan and Non-ERISA Plan, or pursuant to applicable federal, state or local law, to have paid as contributions to such ERISA Plan or Non-ERISA Plan as of the last day of the most recent fiscal year of such ERISA Plan or Non-ERISA Plan ended prior to the date hereof, and no accumulated funding deficiency (as defined in Section 302 of ERISA and Section 412 of the Code), whether or not waived, exists with respect to any ERISA Plan.

3.18 BOOKS AND RECORDS. The minute books of the Company contain records of all meetings and other corporate actions of its stockholders and its Board of Directors and committees thereof, which are complete and accurate in all material respects. The stock ledger of the Company is complete and reflects all issuances, transfers, repurchases and cancellations of shares of capital stock of the Company.

3.19 U.S. REAL PROPERTY HOLDING CORPORATION. The Company is not now and has never been a "United States Real Property Holding Corporation" as defined in Section 897(c)(2) of the Code and Section 1.897-2(b) of the Regulations promulgated by the Internal Revenue Service.

3.20 DISCLOSURES. Neither this Agreement nor any Schedule or Exhibit hereto, nor any certificate or instrument furnished to the Purchasers at the Closing or as required by the terms of this Agreement, when read together, contains or will contain any untrue statement of a material fact or omits or will omit to state a material fact necessary in order to make the statements contained herein or therein, in light of the circumstances under which they were made, not misleading.

3.21 YEAR 2000 COMPATIBILITY. To the best of the Company's knowledge, all of the Company's material products (including products currently under development), if applicable, will record, store, process and calculate and present calendar dates falling on and after January 1, 2000, and will calculate any information dependent on or relating to such dates in substantially the same manner and with substantially the same functionality, data integrity and performance as the products record, store, process, calculate and present calendar dates on or before December 31, 1999, or calculate any information dependent on or relating to such date (collectively "Year 2000 Compliant"). To the best of the Company's knowledge, all of the Company's material products will lose

no material functionality with respect to the introduction of records containing dates falling on or after January 1, 2000. To the best of the Company's knowledge, all of the Company's internal computer systems, including without limitation, its accounting systems, are Year 2000 Compliant.

4. REPRESENTATIONS OF THE PURCHASERS. Each Purchaser represents and warrants to the Company as follows:

4.1 INVESTMENT. Such Purchaser is acquiring the Shares, and the shares of Common Stock into which the Shares may be converted, for its or his own account for investment and not with a view to, or for sale in connection with, any distribution thereof, nor with any present intention of distributing or selling the same; and such Purchaser has no present or contemplated agreement, undertaking, arrangement, obligation, indebtedness or commitment providing for the disposition thereof. Such Purchaser acknowledges that the Shares are restricted securities as defined under the Securities Act and shall bear the legends set forth in Section 6.3 hereof.

4.2 AUTHORITY. Such Purchaser has full power and authority to enter into and to perform this Agreement in accordance with its terms. Such Purchaser represents that it has not been organized, reorganized or recapitalized specifically for the purpose of investing in the Company. This Agreement and the Ancillary Agreement to be executed by such Purchaser have been duly executed and delivered by such Purchaser and constitute valid and binding obligations of such Purchaser enforceable in accordance with their respective terms. The execution of and performance of the transactions contemplated by this Agreement and the Ancillary Agreements to be executed by such Purchaser and compliance with their provisions by such Purchaser will not violate any provision of law and will not conflict with or result in any breach of any of the terms, conditions or provisions of, or constitute a default under, or require a consent or waiver under, its organizational documents (each as amended to date) or any indenture, lease, agreement or other instrument to which the Purchaser is a party or by which it or any of its properties is bound, or any decree, judgment, order, statute, rule or regulation applicable to such Purchaser.

4.3 EXPERIENCE. Such Purchaser has carefully reviewed the representations concerning the Company contained in this Agreement and has made detailed inquiry concerning the Company, its business and its personnel; the officers of the Company have made available to such Purchaser any and all written information which it has requested and have answered to such Purchaser's satisfaction all inquiries made by such Purchaser; and such Purchaser has sufficient knowledge and experience in investing in companies similar to the Company so as to be able to evaluate the risks and merits of its investment in the Company and is able financially to bear the risks thereof, including a complete loss of its investment. Such Purchaser understands that an investment in the Company involves a high degree of risk in view of the fact that the

Company is a start-up enterprise with minimal operating history, and there may never be an established market for the Company's capital stock.

4.4 STATUS. Such Purchaser is an "accredited investor" as that term is defined in Rule 501 of Regulation D promulgated under the Securities Act. Such Purchaser represents that its investment in Series D Preferred Stock will not violate any existing policy of its employer and that it has the authority to make such an investment.

5. COVENANTS OF THE COMPANY.

5.1 INSPECTION. The Company shall permit each Purchaser (together with any of its affiliates) holding not less than 237,805 shares of Series D Stock at the relevant time (as adjusted for stock splits, stock dividends, recapitalizations and similar events), or any authorized representative thereof, to visit and inspect the properties of the Company, including its corporate and financial records, and to discuss its business and finances with officers of the Company, during normal business hours following reasonable notice and as often as may be reasonably requested, without interruption of the business of the Company and subject to the confidentiality obligations of Section 7.2 hereof.

5.2 FINANCIAL STATEMENTS AND OTHER INFORMATION.

(a) So long as a Purchaser (together with any of its affiliates) holds at least 237,805 shares of Series D Preferred Stock (as adjusted for stock splits, stock dividends, recapitalizations and similar events), the Company shall deliver to such Purchaser:

(i) within 90 days after the end of each fiscal year of the Company, an audited balance sheet of the Company as at the end of such year, and audited statements of operations, stockholders' equity and cash flows of the Company for such year, certified by certified public accountants of established national reputation selected by the Company, and prepared in accordance with generally accepted accounting principles; and

(ii) within 45 days after the end of each fiscal quarter of the Company, an unaudited balance sheet of the Company as at the end of such quarter, and unaudited statements of operations and cash flows of the Company for such fiscal quarter and for the current fiscal year to the end of such fiscal quarter.

(b) So long as a Purchaser (together with any of its affiliates) holds at least 237,805 shares of Series D Preferred Stock (as adjusted for stock splits, stock dividends, recapitalizations and similar events), the Company shall deliver to such Purchaser:

(i) within 30 days after the end of each month, an unaudited balance sheet of the Company as at the end of such month and unaudited statements of operations and cash flows of the Company for such month and for the current fiscal year to the end of such month, setting forth in comparative form the Company's projected financial statements for the corresponding periods for the current fiscal year;

(ii) as soon as available, but in any event within 30 days after commencement of each new fiscal year, a budget, consisting of projected financial statements for such fiscal year; and

(iii) with reasonable promptness, such other notices, information and data with respect to the Company as the Company delivers to the holders of its Common Stock, and such other information and data as such Purchaser may from time to time reasonably request.

(c) The foregoing financial statements shall be prepared on a consolidated basis if the Company then has any subsidiaries. The financial statements delivered pursuant to clause (ii) of paragraph (a) and clause (i) of paragraph (b) shall be accompanied by a certificate of the chief financial officer of the Company stating that such statements have been prepared in accordance with generally accepted accounting principles consistently applied (except as noted) and fairly present, in all material respects, the financial condition and results of operations of the Company at the date thereof and for the periods covered thereby (subject, in the case of any such unaudited financial statements to the absence of footnotes and to year-end adjustments).

5.3 MATERIAL CHANGES AND LITIGATION. The Company shall promptly notify the Purchasers of any material adverse change in the business, assets or condition, financial or otherwise, of the Company and of any litigation or governmental proceeding or investigation brought or, to the best of the Company's knowledge, threatened against the Company, or against Hassan Ahmed, Rubin Gruber, Michael G. Hluchyj or Kwok P. Wong (the "FOUNDERS") or any officer, director, key employee or principal stockholder of the Company materially adversely affecting or which, if adversely determined, would materially adversely affect the Company's business, prospects, assets or condition, financial or otherwise.

5.4 INSURANCE.

(a) The Company shall maintain for a period of at least three years from the procurement thereof, term life insurance upon the lives of each of the Founders, in the amount of $1,000,000, with the proceeds payable to the Company.

(b) The Company shall maintain in effect, policies of workers' compensation insurance and of insurance with respect to its properties and business,

including, without limitation, insurance against loss, damage, fire, theft, public liability and other risks, which is adequate for the maintenance and preservation of the Company's properties and business.

5.5 EMPLOYEE AGREEMENTS. The Company shall require all employees hereafter employed or engaged by the Company who are at or above the director level or other key employees to enter into a Noncompetition and Confidentiality Agreement covering a period of one year following the termination of such employee's employment with the Company, substantially in the form attached hereto as EXHIBIT F or in such other form as may be approved by the Board of Directors.

5.6 RELATED PARTY TRANSACTIONS. The Company shall not enter into any agreement with any stockholder, officer or director of the Company, or any "affiliate" or "associate" of such persons (as such terms are defined in the rules and regulations promulgated under the Securities Act), including without limitation any agreement or other arrangement providing for the furnishing of services by, rental of real or personal property from, or otherwise requiring payments to, any such person or entity, without the consent of at least a majority of the members of the Company's Board of Directors having no interest in such agreement or arrangement.

5.7 RESERVATION OF COMMON STOCK. The Company shall reserve and maintain a sufficient number of shares of Common Stock for issuance upon conversion of all of the outstanding Shares.

5.8 TERMINATION OF COVENANTS. The covenants of the Company contained in Sections 5.1 through 5.7 shall terminate, and be of no further force or effect, upon the closing of the Company's first offering of Common Stock to the public, resulting in net proceeds to the Company of at least $25,000,000, and at a price per share of at least $19.68 (as adjusted for stock splits, stock dividends, recapitalizations and similar events) or, at such time as the Purchasers (together with any affiliated entities to whom Shares have been transferred) own less than an aggregate of 237,805 shares of Series D Preferred Stock (as adjusted for stock splits, stock dividends, recapitalizations and similar events).

5.9 QUALIFIED SMALL BUSINESS STOCK. The Company shall submit to its stockholders (including the Purchasers) and to the Internal Revenue Service any reports that may be required under Section 1202(d)(1)(C) of the Code and the Regulations promulgated thereunder. In addition, within ten days after a Purchaser's written request therefor, the Company shall deliver to such Purchaser a written statement indicating whether such Purchaser's interest in the Company constitutes "qualified small business stock" as defined in Section 1202(c) of the Code.

6. TRANSFER OF SHARES.

6.1 RESTRICTED SHARES. "RESTRICTED SHARES" means (i) the Shares, (ii) the shares of Common Stock issued or issuable upon conversion of the Shares, (iii) any shares of capital stock of the Company acquired by a Purchaser pursuant to the Investor Agreement or the Right of First Refusal Agreement, and (iv) any other shares of capital stock of the Company issued in respect of such shares (as a result of stock splits, stock dividends, reclassifications, recapitalizations, or similar events); PROVIDED, HOWEVER, that shares of Common Stock which are Restricted Shares shall cease to be Restricted Shares (i) upon any sale pursuant to a registration statement under the Securities Act, or under Section 4(1) of the Securities Act or Rule 144 under the Securities Act, or (ii) at such time as they become eligible for sale under Rule 144(k) under the Securities Act.

6.2 REQUIREMENTS FOR TRANSFER.

(a) Restricted Shares shall not be sold or transferred unless (1) either (i) they first shall have been registered under the Securities Act, or (ii) the Company first shall have been furnished with an opinion of legal counsel, reasonably satisfactory to the Company, to the effect that such sale or transfer is exempt from the registration requirements of the Securities Act and (2) such actions are in compliance with applicable state securities laws.

(b) Notwithstanding the foregoing, no registration or opinion of counsel shall be required for (i) a transfer by a Purchaser which is a partnership to a partner of such partnership or a retired partner of such partnership who retires after the date hereof, or to the estate of any such partner or retired partner, if the transferee agrees in writing to be subject to the terms of this Section 6 to the same extent as if he were an original Purchaser hereunder, or (ii) a transfer made in accordance with Rule 144 under the Securities Act.

6.3 LEGEND. Each certificate representing Restricted Shares shall bear a legend substantially in the following form:

> "The shares represented by this certificate have not been registered under the Securities Act of 1933, as amended, and may not be offered, sold or otherwise transferred, pledged or hypothecated unless and until such shares are registered under such Act or an opinion of counsel satisfactory to the Company is obtained to the effect that such registration is not required."

The foregoing legend shall be removed from the certificates representing any Restricted Shares, at the request of the holder thereof, at such time as they become eligible for resale pursuant to Rule 144(k) under the Securities Act.

6.4 RULE 144A INFORMATION. The Company shall, at all times during which it is neither subject to the reporting requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, as amended (the "EXCHANGE ACT"), nor exempt from reporting pursuant to Rule 12g3-2(b) under the Exchange Act, upon the written request of a Purchaser, provide in writing to such Purchaser, and to any prospective transferee of any Restricted Shares of such Purchaser, the information concerning the Company described in Rule 144A(d)(4) under the Securities Act ("RULE 144A INFORMATION"). The Company also shall, upon the written request of a Purchaser, cooperate with and assist such Purchaser or any member of the National Association of Securities Dealers, Inc. PORTAL system in applying to designate and thereafter maintain the eligibility of the Restricted Shares for trading through PORTAL. The Company's obligations under this Section 6.4 shall at all times be contingent upon receipt from the prospective transferee of Restricted Shares of a written agreement to take all reasonable precautions to safeguard the Rule 144A Information from disclosure to anyone other than persons who will assist such transferee in evaluating the purchase of any Restricted Shares and to use such Rule 144A Information only for such evaluation purposes.

7. MISCELLANEOUS.

7.1 SUCCESSORS AND ASSIGNS. This Agreement, and the rights and obligations of each Purchaser hereunder, may be assigned by such Purchaser to any person or entity to which at least 237,805 Shares, as adjusted for stock splits, stock dividends, recapitalizations and similar events (or 100% of the Shares originally purchased hereunder by such Purchaser, if less than 237,805 Shares), are transferred by such Purchaser, and such transferee shall be deemed a "Purchaser" for purposes of this Agreement; provided that the transferee provides written notice of such assignment to the Company and agrees to be bound by the terms and conditions set forth herein.

7.2 CONFIDENTIALITY. The Purchasers agree that they will keep confidential and will not disclose or divulge any confidential, proprietary or secret information which they may obtain from the Company pursuant to financial statements, reports and other materials submitted by the Company to the Purchasers pursuant to this Agreement or any rights granted hereunder, unless such information is known, or until such information becomes known, to the public; PROVIDED, HOWEVER, that a Purchaser may disclose such information (i) to its attorneys, accountants, consultants, and other professionals to the extent necessary to obtain their services in connection with its investment in the Company, (ii) to any prospective purchaser of any Shares from such Purchaser as long as such prospective purchaser agrees in writing to be bound by the provisions of this Section, or (iii) to any affiliate of such Purchaser or to a partner, shareholder or subsidiary of such Purchaser; subject to the agreement of such party to keep such information confidential as set forth herein. Each Purchaser agrees that it will not make, issue or release any public announcement, public statement or public acknowledgement of the dollar amount of any Purchaser's investment in Series D Preferred Stock. In addition, no Purchaser shall make, issue or release any public

announcement, public statement or public acknowledgement of who served as the lead investor in the Series D Preferred Stock financing unless the lead investor shall have reviewed such release prior to its publication.

7.3 SURVIVAL OF REPRESENTATIONS AND WARRANTIES. All agreements, representations and warranties contained herein shall survive the execution and delivery of this Agreement and the closing of the transactions contemplated hereby for a period of eighteen (18) months from the date hereof.

7.4 EXPENSES. The Company shall pay, at the Closing, the reasonable costs and expenses of Gibson, Dunn & Crutcher LLP, counsel to the Purchasers, not to exceed $15,000 in the aggregate, in connection with the preparation of this Agreement and the other agreements and documents contemplated hereby and the closing of the transactions contemplated hereby.

7.5 NOTICES. All notices, requests, consents, and other communications under this Agreement shall be in writing and shall be delivered by hand, sent via a reputable nationwide overnight courier service or mailed by first class certified or registered mail, return receipt requested, postage prepaid:

If to the Company, at Sonus Networks, Inc., 5 Carlisle Road, Westford, MA 01886, Attn: President, or at such other address or addresses as may have been furnished in writing by the Company to the Purchasers, with a copy to Bingham Dana LLP, 150 Federal Street, Boston, MA 02110, Attn: David L. Engel, Esq.

If to a Purchaser, at its address as set forth on SCHEDULE I attached hereto, or at such other address or addresses as may have been furnished to the Company in writing by such Purchaser, with a copy to Gibson, Dunn & Crutcher LLP, Attn: Peter Heilmann, Esq.

Notices provided in accordance with this Section 7.5 shall be deemed delivered upon personal delivery, one business day after being sent via a reputable nationwide overnight courier service, or five business days after deposit in the mail.

7.6 BROKERS. The Company and the Purchasers each (i) represents and warrants to the other parties hereto that he, she or it has retained no finder or broker in connection with the transactions contemplated by this Agreement, and (ii) will indemnify and save the other parties harmless from and against any and all claims, liabilities or obligations with respect to brokerage or finders' fees or commissions in connection with the transactions contemplated by this Agreement asserted by any person on the basis of any agreement, statement or representation alleged to have been made by such indemnifying party.

7.7 ENTIRE AGREEMENT. This Agreement and the Ancillary Agreements embody the entire agreement and understanding between the parties hereto with respect to the subject matter hereof and supersedes all prior agreements and understandings relating to such subject matter.

7.8 AMENDMENTS AND WAIVERS. Except as otherwise expressly set forth in this Agreement, any term of this Agreement may be amended and the observance of any term of this Agreement may be waived (either generally or in a particular instance and either retroactively or prospectively), with the written consent of the Company and the holders of at least 66 2/3% of the shares of Common Stock issued or issuable upon conversion of the Shares. Any amendment or waiver effected in accordance with this Section 7.8 shall be binding upon each holder of any Shares (including shares of Common Stock into which such Shares have been converted) and each future holder of all such securities and the Company. No waivers of or exceptions to any term, condition or provision of this Agreement, in any one or more instances, shall be deemed to be, or construed as, a further or continuing waiver of any such term, condition or provision.

7.9 COUNTERPARTS. This Agreement may be executed in one or more counterparts, each of which shall be deemed to be an original, but all of which shall be one and the same document.

7.10 SECTION HEADINGS. The section headings are for the convenience of the parties and in no way alter, modify, amend, limit, or restrict the contractual obligations of the parties.

7.11 SEVERABILITY. The invalidity or unenforceability of any provision of this Agreement shall not affect the validity or enforceability of any other provision of this Agreement.

7.12 GOVERNING LAW. This Agreement shall be governed by and construed in accordance with the laws of the State of Delaware.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

Executed as an instrument under seal as of the date first written above.

COMPANY:

SONUS NETWORKS, INC.

By: /s/ Hassan Ahmed

Hassan Ahmed
President

PURCHASERS:

BroadBand Office, Inc.
2900 Telestar Court
Falls Church, VA 22042

By: /s/ Johnson Agogbua

Name: Johnson Agogbua
Title: Vice President, Engineering

Credit Suisse First Boston Venture Fund I, L.P.
2400 Hanover Street
Palo Alto, CA

By: QBB Management I, LLC, its General Partner

By: /s/ Frank Quattrone

Name: Frank Quattrone
Title: Member

Time Warner Telecom Inc.
10475 Park Meadows Drive
Suite 4400
Littleton, CO 80124

By: /s/ Paul B. Jones

Name: Paul B. Jones
Title: Senior Vice President
General Counsel & Regulatory Policy

ICI Capital LLC
3625 Queen Palm Drive
Tampa, FL 33611

By: /s/ Raymond L. Lawless

Name: Raymond L. Lawless
Title: Vice President and Treasurer

Williams Communications, Inc.
One Williams Center
Tulsa, OK 74172

By: /s/ Dell B. [ILLEGIBLE]

Name:
Title:

Global Crossing Ventures, Inc.
141 Caspian Court
Sunnyvale, CA 94089

By: /s/ Michael Cohen

Name: Michael Cohen
Title:

Z-Tel Technologies, Inc.
601 S. Harbour Island Blvd.
Suite 220
Tampa, FL 33602

By: /s/ Eduard J. Mayer

Name: Eduard J. Mayer
Title: President

Tailwind Capital Partners 2000, L.P.
c/o Thomas Weisel Partners
One Montgomery Street, Suite 3700
San Francisco, CA 94104

By: Thomas Weisel Capital Partners LLC,
its General Partner

By: /s/ Marianne Winkler

Name: Marianne Winkler
Title: CFO

Hambrecht & Quist California
One Bush Street
San Francisco, CA 94104

By: /s/ Thomas Szymoniak

Name: Thomas Szymoniak
Title: Attorney-in-Fact

Hambrecht & Quist California
One Bush Street
San Francisco, CA 94104

By: /s/ Thomas Szymoniak

Name: Thomas Szymoniak
Title: Attorney-in-Fact

H&Q Employee Venture Fund 2000, L.P.
One Bush Street
San Francisco, CA 94104

By: H&Q Venture Management LLC, its General Partner

By: /s/ Thomas Szymoniak

Name: Thomas Szymoniak
Title: Attorney-in-Fact

Access Technology Partners, L.P.
One Bush Street
San Francisco, CA 94104

By: Access Technology Management LLC, its General Partner

By: /s/ Thomas Szymoniak

Name: Thomas Szymoniak
Title: Attorney-in-Fact

Access Technology Partners Brokers Fund, L.P.
One Bush Street
San Francisco, CA 94104

By: H&Q Venture Management, LLC, its General Partner

By: /s/ Thomas Szymoniak

Name: Thomas Szymoniak
Title: Attorney-in-Fact

Viatel, Inc.
685 Third Avenue,
New York, NY 10017

By: /s/ Sheldon M. Goldman

Name: Sheldon M. Goldman
Title: EVP

VYTL, LLC
685 Third Avenue,
New York, NY 10017

By: /s/ Sheldon M. Goldman

Name: Sheldon M. Goldman
Title:

Eagle Teleprograms, Inc.
60 East 56th Street
New York, NY 10022

By: /s/ Kent Srikanth Chargundla

Name: Kent Srikanth Chargundla
Title: Chairman

River Partners I
c/o Tim Walsh
1221 Avenue of the Americas
New York, NY 10020

By: /s/ Tim Walsh

Name: Tim Walsh
Title: Managing Director

Carrier 1

By:

Name:
Title:

Whitman Partners, L.P.

By: /s/ Douglas Whitman

Name:
Its: Manager

By:

Name:
Title:

U.S. Bancorp Piper Jaffray ECM Fund I, LLC
222 South Ninth Street
Minneapolis, MN 55402

By: /s/ John Jacobs

Name: John Jacobs
Title: Managing Member

GD&C Partners 2000 Fund, LLC
333 South Grand Avenue
Los Angeles, CA 90071

By: /s/ [Illegible]

Name:
Its: Manager

SCHEDULE I

NAME OF AND ADDRESS OF PURCHASER	NO. OF SHARES OF SERIES D PREFERRED STOCK	AGGREGATE PURCHASE PRICE
Credit Suisse First Boston Venture Fund I, L.P. 2400 Hanover Street Palo Alto, CA	297,257	$4,875,014.80
Time Warner Telecom Inc. 10475 Park Meadows Drive Suite 4400 Littleton, CO 80124	182,927	$3,000,002.80
ICI Capital LLC 3625 Queen Palm Drive Tampa, FL 33611	121,952	$2,000,012.80
BroadBand Office, Inc. 2900 Telestar Court Falls Church, VA 22042	121,952	$2,000,012.80
Williams Communications, Inc. One Williams Center Tulsa, OK 74172	91,464	$1,500,009.60
Global Crossing Ventures, Inc. 141 Caspian Court Sunnyvale, CA 94089	60,976	$1,000,006.40
Z-Tel Technologies, Inc. 601 S. Harbour Island Blvd. Suite 220 Tampa, FL 33602	42,683	$700,001.20
Tailwind Capital Partners 2000, L.P. c/o Thomas Weisel Partners One Montgomery Street, Suite 3700 San Francisco, CA 94104	152,440	$2,500,016.00
Hambrecht & Quist California One Bush Street San Francisco, CA 94104	10,244	$168,001.60
Hambrecht & Quist California One Bush Street San Francisco, CA 94104	6,098	$100,007.20

H&Q Employee Venture Fund 2000, L.P. One Bush Street San Francisco, CA 94104	6,098	$100,007.20
Access Technology Partners, L.P. One Bush Street San Francisco, CA 94104	97,561	$1,600,000.40
Access Technology Partners Brokers Fund, L.P. One Bush Street San Francisco, CA 94104	1,951	$31,996.40
U.S. Bancorp Piper Jaffray ECM Fund I, LLC 222 South Ninth Street Minneapolis, MN 55402	91,464	$1,500,009.60
Viatel, Inc. 685 Third Avenue, New York, NY 10017	60,976	$1,000,006.40
VYTL, LLC 685 Third Avenue, New York, NY 10017	18,293	$300,005.20
Eagle Teleprogramming, Inc. 60 East 56th Street New York, NY 10022	15,244	$250,001.60
River Partners I c/o Tim Walsh 1221 Avenue of the Americas New York, NY 10020	60,976	$1,000,006.40
Whitman Partners, L.P. _____ _____	60,976	$1,000,006.40
Carrier 1 _____ _____	60,976	$1,000,006.40
GD&C Partners 2000 Fund, LLC 333 South Grand Avenue Los Angeles, CA 90071	7,622	$125,000.80

Exhibit 10.8

THIRD AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT

This Third Amended and Restated Investor Rights Agreement (this "AGREEMENT"), dated as of March 9, 2000, is entered into by and among Sonus Networks, Inc., a Delaware corporation (the "COMPANY"), the persons and entities listed on the signature pages hereto under the heading "Purchasers" (individually, a "PURCHASER", and collectively, the "PURCHASERS") and Hassan Ahmed, Rubin Gruber, Michael G. Hluchyj and Kwok P. Wong (individually, a "FOUNDER", and collectively, the "FOUNDERS").

BACKGROUND

WHEREAS, on November 18, 1997, the Company, certain of the Purchasers (the "SERIES A PURCHASERS") and the Founders entered into an Investor Rights Agreement (the "ORIGINAL AGREEMENT") to provide for (i) the composition of the Board of Directors of the Company, (ii) certain arrangements with respect to the registration of shares of capital stock of the Company under the Securities Act of 1933, and (iii) a right of first refusal with respect to the sale of any securities of the Company;

WHEREAS, in connection with the purchase and sale of 3,144,287 shares of Series B Convertible Preferred Stock, $.01 par value per share, of the Company ("SERIES B PREFERRED STOCK"), by certain of the Purchasers (the "SERIES B PURCHASERS"), the Company and the Series B Purchasers entered into an Amended and Restated Investor Rights Agreement (the "RESTATED AGREEMENT");

WHEREAS, in connection with the purchase and sale of 1,939,681 shares of Series C Convertible Preferred Stock, $.01 par value per share, of the Company ("SERIES C PREFERRED STOCK"), by certain of the Purchasers (the "SERIES C PURCHASERS"), the Company and the Series C Purchasers entered into a Second Amended and Restated Investor Rights Agreement (the "SECOND RESTATED AGREEMENT");

WHEREAS, the Company and certain of the Purchasers (the "SERIES D PURCHASERS") have entered into a Series D Preferred Stock Purchase Agreement of even date herewith (the "PURCHASE AGREEMENT"); and

WHEREAS, in connection with the purchase and sale of up to 1,585,366 shares of Series D Convertible Preferred Stock, $.01 par value per share, of the Company ("SERIES D PREFERRED STOCK"), by the Series D Purchasers, pursuant to the Purchase Agreement, the parties hereto desire to amend and restate the Second Restated Agreement as provided herein (the terms of this Agreement to supersede the terms of the Second Restated Agreement in their entirety).

NOW, THEREFORE, in consideration of the mutual promises and covenants contained in this Agreement, and the consummation of the sale and purchase of the Series D Preferred Stock pursuant to the Purchase Agreement, and for other valuable

consideration, receipt of which is hereby acknowledged, the parties hereto agree as follows:

ARTICLE I
DEFINITIONS

As used in this Agreement, the following terms shall have the following respective meanings:

"COMMISSION" means the United States Securities and Exchange Commission, or any other federal agency at the time administering the Securities Act.

"COMMON STOCK" means the common stock, $0.001 par value per share, of the Company.

"EXCHANGE ACT" means the Securities Exchange Act of 1934, as amended, or any similar federal statute, and the rules and regulations of the Commission issued under such Act, as they each may, from time to time, be in effect.

"INITIAL PUBLIC OFFERING" means (i) when such term is used in connection with the Series A, Series B or Series C Preferred Stock, the sale of shares of Common Stock in a firm commitment underwritten public offering pursuant to a Registration Statement at a price to the public of at least $8.00 per share (adjusted for stock splits, stock dividends and similar events) resulting in proceeds (net of the underwriting discounts or commissions and offering expenses) to the Company of at least $10,000,000, and (ii) when such term is used in connection with the Series D Preferred Stock, the sale of shares of Common Stock in a firm commitment underwritten public offering pursuant to a Registration Statement at a price to the public of at least $19.68 per share (adjusted for stock splits, stock dividends and similar events) resulting in proceeds (net of the underwriting discounts or commissions and offering expenses) to the Company of at least $25,000,000.

"REGISTRATION STATEMENT" means a registration statement filed by the Company with the Commission for a public offering and sale of Common Stock by the Company (other than a registration statement on Form S-8 or Form S-4, or their successors, or any other form for a similar limited purpose, or any registration statement covering only securities proposed to be issued in exchange for securities or assets of another corporation).

"REGISTRATION EXPENSES" means the expenses described in Section 4 of Article III below.

"REGISTRABLE SHARES" means (i) the shares of Common Stock issued or issuable upon conversion of the Shares, (ii) shares of Common Stock held from time to time by the Founders, (iii) any shares of Common Stock, and any shares of Common Stock issued or issuable upon the conversion or exercise of any other securities, acquired

by the Purchasers pursuant to Article IV of this Agreement or pursuant to the Third Amended and Restated Right of First Refusal and Co-Sale Agreement, of even date herewith, among the Company, the Purchasers and the Founders, and (iv) any other shares of Common Stock issued in respect of such shares (because of stock splits, stock dividends, reclassifications, recapitalizations, or similar events); PROVIDED, HOWEVER, that shares of Common Stock which are Registrable Shares shall cease to be Registrable Shares (a) upon any sale of such shares pursuant to a Registration Statement or Rule 144 under the Securities Act, (b) upon any sale of such shares in any manner to a person or entity which, by virtue of Section 2 of Article V of this Agreement, is not entitled to the rights provided by this Agreement, or (c) for purposes of Section 2 of Article III hereof, with respect to any one or more applicable series of the Company's Preferred Stock, following the third anniversary of the Initial Public Offering. Wherever reference is made in this Agreement to a request or consent of holders of a certain percentage of Registrable Shares, the determination of such percentage shall include shares of Common Stock issuable upon conversion of the Shares even if such conversion has not yet been effected.

"SECURITIES ACT" means the Securities Act of 1933, as amended, or any similar federal statute, and the rules and regulations of the Commission issued under such Act, as they each may, from time to time, be in effect.

"SERIES A PREFERRED STOCK" means the Series A Convertible Preferred Stock of the Company, $.01 par value per share.

"SERIES B PREFERRED STOCK" means the Series B Convertible Preferred Stock of the Company, $.01 par value per share.

"SERIES C PREFERRED STOCK" means the Series C Convertible Preferred Stock of the Company, $.01 par value per share.

"SERIES D PREFERRED STOCK" means the Series D Convertible Preferred Stock of the Company, $.01 par value per share.

"SHARES" means the Series A Preferred Stock, the Series B Preferred Stock, the Series C Preferred Stock and the Series D Preferred Stock.

"STOCKHOLDERS" means the Purchasers, the Founders and any persons or entities to whom the rights granted to Purchasers or Founders under this Agreement are transferred by a Purchaser or Founder, its successors or permitted assigns pursuant to Section 2 of Article V below.

ARTICLE II
VOTING RIGHTS

1. VOTING OF SHARES. In any and all elections of directors of the Company (whether at a meeting or by written consent in lieu of a meeting), each Stockholder shall

vote or cause to be voted all Voting Shares (as defined in Section 2 of Article II below) owned by him, her or it, or over which he, she or it has voting control, and otherwise use his, her or its respective best efforts, so as to fix the number of directors at seven and to elect as directors (i) the Chief Executive Officer of the Company (initially Hassan Ahmed), (ii) a designee of the Company (initially Rubin Gruber), (iii) one representative designated by North Bridge Venture Partners II, L.P. (initially Edward T. Anderson), (iv) one representative designated by Matrix Partners IV, L.P. (initially Paul J. Ferri), (v) one person mutually agreed upon by all of the other members of the Board of Directors (initially Paul J. Severino), and (vi) two persons selected by the majority vote of the other members of the Board of Directors. The obligation of the Stockholders under this Section 1 to elect as a director (a) a designee of North Bridge Venture Partners II, L.P. shall continue only for so long as North Bridge Venture Partners II, L.P. (together with any affiliates, within the meaning of Rule 144 under the Securities Act) owns, after giving effect to the conversion of all convertible preferred stock into Common Stock, at least 2,000,000 shares of Common Stock (subject to appropriate adjustment for stock splits, stock dividends, combinations and other similar recapitalizations affecting such shares) and (b) a designee of Matrix Partners IV, L.P. shall continue only for so long as Matrix Partners IV, L.P. (together with any affiliates, within the meaning of Rule 144 under the Securities Act) owns, after giving effect to the conversion of all convertible preferred stock into Common Stock, at least 2,000,000 shares of Common Stock (subject to appropriate adjustment for stock splits, stock dividends, combinations and other similar recapitalizations affecting such shares).

2. VOTING SHARES. "VOTING SHARES" shall mean and include any and all shares of the Common Stock, Shares, and/or shares of capital stock of the Company, by whatever name called, which carry voting rights (including voting rights which arise by reason of default).

3. RESTRICTIVE LEGEND. All certificates representing Voting Shares owned or hereafter acquired by the Stockholders or any transferee bound by this Agreement shall have affixed thereto a legend substantially in the following form:

> "The shares of stock represented by this certificate are subject to certain voting agreements as set forth in an Investor Rights Agreement by and among the registered owner of this certificate, the Company and certain other stockholders of the Company, a copy of which is available for inspection at the offices of the Secretary of the Company."

4. TRANSFERS OF VOTING RIGHTS. Any transferee to whom Voting Shares are transferred by a Stockholder, whether voluntarily or by operation of law, shall be bound by the voting obligations imposed upon the transferor under this Agreement, to the same extent as if such transferee were a Stockholder hereunder.

ARTICLE III
REGISTRATION RIGHTS

1. REQUIRED REGISTRATIONS.

(a) At any time after the earlier of November 18, 2000 or the closing of the Company's first underwritten public offering of shares of Common Stock pursuant to a Registration Statement, Stockholders (other than the Founders) holding in the aggregate at least 35% of the Registrable Shares held by the Stockholders (other than the Founders) may request, in writing, that the Company effect the registration on Form S-1 or Form S-2 (or any successor form) of Registrable Shares owned by such Stockholders having an aggregate offering price of at least $5,000,000 (based on the market price or fair value at the time of such request). If the Stockholders initiating the registration intend to distribute the Registrable Shares by means of an underwriting, they shall so advise the Company in their request. Thereupon, the Company shall, as expeditiously as possible, use its best efforts to effect the registration on Form S-1 or Form S-2 (or any successor form) of all Registrable Shares which the Company has been requested to so register.

(b) At any time after the Company becomes eligible to file a Registration Statement on Form S-3 (or any successor form relating to secondary offerings), a Stockholder or Stockholders may request the Company, in writing, to effect the registration on Form S-3 (or such successor form), of Registrable Shares having an aggregate offering price of at least $1,000,000 (based on the public market price at the time of such request). Thereupon, the Company shall, as expeditiously as possible, use its best efforts to effect the registration on Form S-3 (or such successor form) of all Registrable Shares which the Company has been requested to so register.

(c) The Company shall not be required to effect more than two registrations pursuant to paragraph (a) above or more than three registrations pursuant to paragraph (b) above; PROVIDED, HOWEVER, that such obligation shall be deemed satisfied only when a registration statement covering the applicable Registrable Shares shall have (i) become effective or (ii) been withdrawn at the request of the Stockholders requesting such registration (other than as a result of information concerning the business or financial condition of the Company which is made known to the Stockholders after the date on which such registration was requested).

(d) If at the time of any request to register Registrable Shares pursuant to this Section 1, the Company is engaged or has plans to engage within 90 days of the time of the request in a registered public offering of securities for its own account or is engaged in any other activity which, in the good faith determination of the Company's Board of Directors, would be adversely affected by the requested registration to the material detriment of the Company, then the Company may at its option direct that such request be delayed for a period not in excess of three months from the effective date of such offering or the date of commencement of such other material activity, as the case

may be, such right to delay a request to be exercised by the Company not more than once in any 12-month period.

2. INCIDENTAL REGISTRATIONS.

(a) Whenever the Company proposes to file a Registration Statement at any time and from time to time, it will, prior to such filing, give written notice to all Stockholders of its intention to do so and, upon the written request of a Stockholder or Stockholders, given within 10 business days after the Company provides such notice (which request shall state the intended method of disposition of such Registrable Shares), the Company shall use its reasonable best efforts to cause all Registrable Shares which the Company has been requested by such Stockholder or Stockholders to register, to be registered under the Securities Act to the extent necessary to permit their sale or other disposition in accordance with the intended methods of distribution specified in the request of such Stockholder or Stockholders; PROVIDED, HOWEVER, that the Company shall have the right to postpone or withdraw any registration effected pursuant to this Section 2 without obligation to any Stockholder.

(b) In connection with any registration under this Section 2 involving an underwriting, the Company shall not be required to include any Registrable Shares in such registration unless the holders thereof accept the terms of the underwriting as agreed upon between the Company and the underwriters selected by it. If in the opinion of the managing underwriter it is desirable because of marketing factors to limit the number of Registrable Shares to be included in the offering, then the Company shall be required to include in the registration only that number of Registrable Shares, if any, which the managing underwriter believes should be included therein; PROVIDED, HOWEVER, that no persons or entities other than the Company, the Stockholders and other persons or entities holding registration rights shall be permitted to include securities in the offering. If the number of Registrable Shares to be included in the offering in accordance with the foregoing is less than the total number of shares which the holders of Registrable Shares have requested to be included, then the holders of Registrable Shares who have requested registration and other holders of securities entitled to include them in such registration shall participate in the registration pro rata based upon their total ownership of shares of Common Stock (giving effect to the conversion into Common Stock of all securities convertible thereinto). If any holder would thus be entitled to include more securities than such holder requested to be registered, the excess shall be allocated among other requesting holders pro rata in the manner described in the preceding sentence.

3. REGISTRATION PROCEDURES. If and whenever the Company is required by the provisions of this Agreement to use its best efforts to effect the registration of any of the Registrable Shares under the Securities Act, the Company shall:

(a) file with the Commission a Registration Statement with respect to such Registrable Shares and use its best efforts to cause that Registration Statement to become effective;

(b) as expeditiously as possible prepare and file with the Commission any amendments and supplements to the Registration Statement and the prospectus included in the Registration Statement as may be necessary to keep the Registration Statement effective, in the case of a firm commitment underwritten public offering, until each underwriter has completed the distribution of all securities purchased by it and, in the case of any other offering, until the earlier of the sale of all Registrable Shares covered thereby or 180 days after the effective date thereof;

(c) as expeditiously as possible furnish to each selling Stockholder such reasonable numbers of copies of the prospectus, including a preliminary prospectus, in conformity with the requirements of the Securities Act, and such other documents as the selling Stockholder may reasonably request in order to facilitate the public sale or other disposition of the Registrable Shares owned by the selling Stockholder; and

(d) as expeditiously as possible use its best efforts to register or qualify the Registrable Shares covered by the Registration Statement under the securities or Blue Sky laws of such states as the selling Stockholder shall reasonably request, and do any and all other acts and things that may be necessary or desirable to enable the selling Stockholder to consummate the public sale or other disposition in such states of the Registrable Shares owned by the selling Stockholder; PROVIDED, HOWEVER, that the Company shall not be required in connection with this paragraph (d) to qualify as a foreign corporation or execute a general consent to service of process in any jurisdiction.

If the Company has delivered preliminary or final prospectuses to the selling Stockholders and after having done so the prospectus is amended to comply with the requirements of the Securities Act, the Company shall promptly notify the selling Stockholders and, if requested, the selling Stockholder shall immediately cease making offers of Registrable Shares and return all prospectuses to the Company. The Company shall promptly provide each selling Stockholder with revised prospectuses and, following receipt of the revised prospectuses, the selling Stockholder shall be free to resume making offers of the Registrable Shares.

Notwithstanding the foregoing, each selling Stockholder shall cease making offers or sales pursuant to a "shelf" Registration Statement during any period (not to exceed 90 days) in which the Company determines, by notice to each selling Stockholder, that it is in possession of material non-public information that, for valid business reasons, it wishes to keep confidential.

If, after a registration statement becomes effective, the Company becomes engaged in any activity which, in the good faith determination of the Company's Board of Directors, involves information that would have to be disclosed in the Registration Statement but which the Company desires to keep confidential for valid business reasons, then the Company may at its option, by notice to such Stockholders, require that the Stockholders who have included Shares in such Registration Statement cease sales of such Shares under such Registration Statement for a period not in excess of three months from the date of such notice, such right to be exercised by the Company not more than

once in any 12-month period. If, in connection therewith, the Company considers it appropriate for such Registration Statement to be amended, the Company shall so amend such Registration Statement as promptly as practicable and such Stockholders shall suspend any further sales of their Shares until the Company advises them that such Registration Statement has been amended. The time periods referred to herein during which such Registration Statement must be kept effective shall be extended for an additional number of days equal to the number of days during which the right to sell shares was suspended pursuant to this paragraph.

4. ALLOCATION OF EXPENSES. The Company will pay all Registration Expenses of all registrations under this Agreement. For purposes of this Section 4, the term "Registration Expenses" shall mean all expenses incurred by the Company in complying with Article III, Section 1, including, without limitation, all registration and filing fees, exchange listing fees, printing expenses, fees and expenses of one counsel for the Company to represent the selling Stockholder(s), state Blue Sky fees and expenses, and the expense of any special audits incident to or required by any such registration, but excluding underwriting discounts, selling commissions and the fees and expenses of selling Stockholders' own counsel.

5. INDEMNIFICATION AND CONTRIBUTION.

(a) In the event of any registration of any of the Registrable Shares under the Securities Act pursuant to this Agreement, the Company will indemnify and hold harmless the seller of such Registrable Shares, each underwriter of such Registrable Shares, and each other person, if any, who controls such seller or underwriter within the meaning of the Securities Act or the Exchange Act against any losses, claims, damages or liabilities, joint or several, to which such seller, underwriter or controlling person may become subject under the Securities Act, the Exchange Act, state securities or Blue Sky laws or otherwise, insofar as such losses, claims, damages or liabilities (or actions in respect thereof) arise out of or are based upon any untrue statement or alleged untrue statement of any material fact contained in any Registration Statement under which such Registrable Shares were registered under the Securities Act, any preliminary prospectus or final prospectus contained in the Registration Statement, or any amendment or supplement to such Registration Statement, or arise out of or are based upon the omission or alleged omission to state a material fact required to be stated therein or necessary to make the statements therein not misleading; and the Company will reimburse such seller, underwriter and each such controlling person for any legal or any other expenses reasonably incurred by such seller, underwriter or controlling person in connection with investigating or defending any such loss, claim, damage, liability or action; PROVIDED, HOWEVER, that the Company will not be liable in any such case to a seller, underwriter or controlling person to the extent that any such loss, claim, damage or liability arises out of or is based upon any untrue statement or omission made in such Registration Statement, preliminary prospectus or final prospectus, or any such amendment or supplement, in reliance upon and in conformity with information furnished to the Company, in writing, by or on behalf of such seller, underwriter or controlling person specifically for use in the preparation thereof.

(b) In the event of any registration of any of the Registrable Shares under the Securities Act pursuant to this Agreement, each seller of Registrable Shares, severally and not jointly, will indemnify and hold harmless the Company, each of its directors and officers and each underwriter (if any) and each person, if any, who controls the Company or any such underwriter within the meaning of the Securities Act or the Exchange Act, against any losses, claims, damages or liabilities, joint or several, to which the Company, such directors and officers, underwriter or controlling person may become subject under the Securities Act, Exchange Act, state securities or Blue Sky laws or otherwise, insofar as such losses, claims, damages or liabilities (or actions in respect thereof) arise out of or are based upon any untrue statement or alleged untrue statement of a material fact contained in any Registration Statement under which such Registrable Shares were registered under the Securities Act, any preliminary prospectus or final prospectus contained in the Registration Statement, or any amendment or supplement to the Registration Statement, or arise out of or are based upon any omission or alleged omission to state a material fact required to be stated therein or necessary to make the statements therein not misleading, if the statement or omission was made in reliance upon and in conformity with information relating to such seller furnished in writing to the Company by or on behalf of such seller specifically for use in connection with the preparation of such Registration Statement, prospectus, amendment or supplement; PROVIDED, HOWEVER, that the obligations of each such Stockholder hereunder shall be limited to an amount equal to the net proceeds to such Stockholder of Registrable Shares sold in connection with such registration.

(c) Each party entitled to indemnification under this Article III, Section 5 (the "Indemnified Party") shall give notice to the party required to provide indemnification (the "Indemnifying Party") promptly after such Indemnified Party has actual knowledge of any claim as to which indemnity may be sought, and shall permit the Indemnifying Party to assume the defense of any such claim or any litigation resulting therefrom; PROVIDED, that counsel for the Indemnifying Party, who shall conduct the defense of such claim or litigation, shall be approved by the Indemnified Party (whose approval shall not be unreasonably withheld); and, PROVIDED FURTHER, that the failure of any Indemnified Party to give notice as provided herein shall not relieve the Indemnifying Party of its obligations under this Article III, Section 5, unless and except to the extent that the Indemnifying Party is prejudiced by the failure of the Indemnified Party to provide timely notice. The Indemnified Party may participate in such defense at such party's expense; PROVIDED, HOWEVER, that the Indemnifying Party shall pay such expense if representation of such Indemnified Party by the counsel retained by the Indemnifying Party would be inappropriate due to actual or potential differing interests between the Indemnified Party and any other party represented by such counsel in such proceeding. No Indemnifying Party, in the defense of any such claim or litigation shall, except with the consent of each Indemnified Party, consent to entry of any judgment or enter into any settlement which does not include as an unconditional term thereof the giving by the claimant or plaintiff to such Indemnified Party of a release from all liability in respect of such claim or litigation, and no Indemnified Party shall consent to entry of

any judgment or settle such claim or litigation without the prior written consent of the Indemnifying Party.

(d) In order to provide for just and equitable contribution to joint liability under the Securities Act in any case in which either (i) any holder of Registrable Shares exercising rights under this Agreement, or any controlling person of any such holder, makes a claim for indemnification pursuant to this Article III, Section 5 but it is judicially determined (by the entry of a final judgment or decree by a court of competent jurisdiction and the expiration of time to appeal or the denial of the last right of appeal) that such indemnification may not be enforced in such case notwithstanding the fact that this Article III, Section 5 provides for indemnification in such case, or (ii) contribution under the Securities Act may be required on the part of any such selling Stockholder or any such controlling person in circumstances for which indemnification is provided under this Article III, Section 5; then, in each such case, the Company and such Stockholder will contribute to the aggregate losses, claims, damages or liabilities to which they may be subject (after contribution from others) in such proportions so that such holder is responsible for the portion represented by the percentage that the public offering price of its Registrable Shares offered by the Registration Statement bears to the public offering price of all securities offered by such Registration Statement, and the Company is responsible for the remaining portion; PROVIDED, HOWEVER, that, in any such case, (A) no such holder will be required to contribute any amount in excess of the net proceeds to it of all Registrable Shares sold by it pursuant to such Registration Statement, and (B) no person or entity guilty of fraudulent misrepresentation, within the meaning of Section 11(f) of the Securities Act, shall be entitled to contribution from any person or entity who is not guilty of such fraudulent misrepresentation.

6. INDEMNIFICATION WITH RESPECT TO UNDERWRITTEN OFFERING. In the event that Registrable Shares are sold pursuant to a Registration Statement in an underwritten offering pursuant to Article III, Section 1, the Company agrees to enter into an underwriting agreement containing customary representations and warranties with respect to the business and operations of an issuer of the securities being registered and customary covenants and agreements to be performed by such issuer, including without limitation customary provisions with respect to indemnification by the Company of the underwriters of such offering.

7. INFORMATION BY HOLDER. Each Stockholder including Registrable Shares in any registration shall furnish to the Company such information regarding such Stockholder and the distribution proposed by such Stockholder as the Company may reasonably request in writing and as shall be required in connection with any registration, qualification or compliance referred to in this Agreement.

8. "STAND-OFF" AGREEMENT. Each Stockholder, if requested by the Company and the managing underwriter of an offering by the Company of Common Stock or other securities of the Company pursuant to a Registration Statement, shall agree not to sell publicly or otherwise transfer or dispose of any Registrable Shares or other securities of

the Company held by such Stockholder for a specified period of time (not to exceed 180 days) following the effective date of such Registration Statement; PROVIDED, that:

(a) with respect to the holders of Series A Preferred Stock, Series B Preferred Stock and Series C Preferred Stock, such agreement shall only apply to the first Registration Statement covering Common Stock to be sold by or on behalf of the Company to the public in an underwritten offering;

(b) with respect to the holders of Series D Preferred Stock, such agreement shall only apply to the first Registration Statement covering Common Stock to be sold by or on behalf of the Company to the public in an underwritten public offering, PROVIDED, HOWEVER, that if all officers, directors and holders of 5% or more of the outstanding Common Stock of the Company (on an as-converted basis) shall enter into such an agreement with respect to the second Registration Statement covering Common Stock to be sold by or on behalf of the Company to the public in an underwritten public offering, the holders of the Series D Preferred Stock shall enter into a similar agreement as such other holders; and

(c) subject to Section 8(b), all officers and directors of the Company and all selling stockholders in such offering enter into agreements similar to the agreements of holders of Series A Preferred Stock, Series B Preferred Stock and Series C Preferred Stock.

9. LIMITATIONS ON SUBSEQUENT REGISTRATION RIGHTS. The Company shall not, without the prior written consent of Purchasers holding 66 2/3% of the Registrable Shares held by all Purchasers, enter into any agreement (other than this Agreement) with any holder or prospective holder of any securities of the Company which would allow such holder or prospective holder (a) to include securities of the Company in any Registration Statement upon terms which are more favorable to such holder or prospective holder than the terms on which holders of Registrable Shares may include shares in such registration, or (b) to make a demand registration which could result in such registration statement being declared effective prior to November 18, 2000.

10. RULE 144 REQUIREMENTS. After the earliest of (a) the closing of the sale of securities of the Company pursuant to a Registration Statement, (b) the registration by the Company of a class of securities under Section 12 of the Exchange Act, or (c) the issuance by the Company of an offering circular pursuant to Regulation A under the Securities Act, the Company agrees to:

(i) comply with the requirements of Rule 144(c) under the Securities Act with respect to current public information about the Company;

(ii) use its best efforts to file with the Commission in a timely manner all reports and other documents required of the Company under the Securities Act and the Exchange Act (at any time after it has become subject to such reporting requirements); and

(iii) furnish to any holder of Registrable Shares upon request (A) a written statement by the Company as to its compliance with the requirements of said Rule 144(c), and the reporting requirements of the Securities Act and the Exchange Act (at any time after it has become subject to such reporting requirements), (B) a copy of the most recent annual or quarterly report of the Company, and (C) such other reports and documents of the Company as such holder may reasonably request to avail itself of any similar rule or regulation of the Commission allowing it to sell any such securities without registration.

ARTICLE IV
RIGHT OF FIRST REFUSAL

1. RIGHT OF FIRST REFUSAL

(a) The Company shall not issue, sell or exchange, agree to issue, sell or exchange, or reserve or set aside for issuance, sale or exchange, (i) any shares of its Common Stock, (ii) any other equity securities of the Company, including, without limitation, shares of preferred stock, (iii) any option, warrant or other right to subscribe for, purchase or otherwise acquire any equity securities of the Company, or (iv) any debt securities convertible into capital stock of the Company (collectively, the "OFFERED SECURITIES"), unless in each such case the Company shall have first complied with Article IV of this Agreement. The Company shall deliver to each Purchaser and Founder a written notice of any proposed or intended issuance, sale or exchange of Offered Securities (the "OFFER"), which Offer shall (i) identify and describe the Offered Securities, (ii) describe the price and other terms upon which they are to be issued, sold or exchanged, and the number or amount of the Offered Securities to be issued, sold or exchanged, (iii) identify the persons or entities, if known, to which or with which the Offered Securities are to be offered, issued, sold or exchanged, and (iv) offer to issue and sell to or exchange with such Purchaser or Founder (A) such portion of the Offered Securities as is equal to (1) 75% of the Offered Securities multiplied by (2) a fraction the numerator of which is the aggregate number of shares of Common Stock issued or issuable upon conversion of the Shares held by such Purchaser or Founder and the denominator of which is the total number of shares of Common Stock issued or issuable upon conversion of the Shares held by all Purchasers and Founders as a group (the "BASIC AMOUNT"), and (B) such additional portion of the Offered Securities as such Purchaser or Founder shall indicate it will purchase or acquire should the other Purchasers and Founders subscribe for less than their Basic Amounts (the "UNDERSUBSCRIPTION AMOUNT"). Each Purchaser or Founder shall have the right, for a period of 20 days following delivery of the Offer, to purchase or acquire, at the price and upon the other terms specified in the Offer, the number or amount of Offered Securities described above. The Offer by its terms shall remain open and irrevocable for such 20-day period.

(b) To accept an Offer, in whole or in part, a Purchaser or Founder must deliver a written notice to the Company prior to the end of the 20-day period of the Offer, setting forth the portion of such Purchaser's Basic Amount that such Purchaser or Founder elects to purchase and, if such Purchaser or Founder shall elect to purchase all of

its Basic Amount, the Undersubscription Amount (if any) that such Purchaser or Founder elects to purchase (the "NOTICE OF ACCEPTANCE"). If the Basic Amounts subscribed for by all Purchasers and Founders are less than the total Basic Amounts, then each Purchaser or Founder who has set forth an Undersubscription Amount in its Notice of Acceptance shall be entitled to purchase, in addition to the Basic Amounts subscribed for, the Undersubscription Amount it has subscribed for; PROVIDED, HOWEVER, that should the Undersubscription Amounts subscribed for exceed the difference between the total Basic Amounts and the Basic Amounts subscribed for (the "Available Undersubscription Amount"), each Purchaser or Founder who has subscribed for any Undersubscription Amount shall be entitled to purchase only that portion of the Available Undersubscription Amount as the Undersubscription Amount subscribed for by such Purchaser or Founder bears to the total Undersubscription Amounts subscribed for by all Purchasers and Founders, subject to rounding by the Board of Directors to the extent it reasonably deems necessary.

(c) In the event that Notice of Acceptances are not given by Purchasers and Founders in respect of all the Offered Securities, the Company shall have 90 days from the expiration of the 20-day period set forth in Article IV, Section 1(a) to issue, sell or exchange all or any part of such Offered Securities as to which a Notice of Acceptance has not been given by the Purchasers and Founders (the "REFUSED SECURITIES"), but only to the offerees or purchasers described in the Offer and only upon terms and conditions (including, without limitation, unit prices and interest rates) which are not more favorable, in the aggregate, to the acquiring person or persons or less favorable to the Company than those set forth in the Offer.

(d) In the event the Company shall propose to sell less than all the Refused Securities (any such sale to be in the manner and on the terms specified in Article IV, Section 1(c)), then each Purchaser or Founder may, at its sole option and in its sole discretion, reduce the number or amount of the Offered Securities specified in its Notice of Acceptance to an amount that shall be not less than the number or amount of the Offered Securities that the Purchaser or Founder elected to purchase pursuant to Article IV, Section 1(b) multiplied by a fraction, (i) the numerator of which shall be the number or amount of Offered Securities the Company actually proposes to issue, sell or exchange (including Offered Securities to be issued or sold to Purchasers and Founders pursuant to Article IV, Section 1(b) prior to such reduction) and (ii) the denominator of which shall be the amount of all Offered Securities. In the event that a Purchaser or Founder so elects to reduce the number or amount of Offered Securities specified in its Notice of Acceptance, the Company may not issue, sell or exchange more than the reduced number or amount of the Offered Securities unless and until such securities have again been offered to the Purchasers and Founders in accordance with Article IV, Section 1(a).

(e) Upon the closing of the issuance, sale or exchange of all or less than all the Refused Securities, the Purchasers and Founders shall acquire from the Company, and the Company shall issue to the Purchasers and Founders, the number or amount of Offered Securities specified in the Notices of Acceptance, as reduced pursuant

to Article IV, Section 1(d) if the Purchasers and Founders have so elected, upon the terms and conditions specified in the Offer. The purchase by the Purchasers and Founders of any Offered Securities is subject in all cases to the preparation, execution and delivery by the Company and the Purchasers and Founders of a purchase agreement relating to such Offered Securities reasonably satisfactory in form and substance to the Purchasers and Founders and the Company.

(f) Any Offered Securities not acquired by the Purchasers and Founders or other persons in accordance with Article IV, Section 1(c) may not be issued, sold or exchanged until they are again offered to the Purchasers and Founders under the procedures specified in this Article.

2. EXCLUDED ISSUANCES. The rights of the Purchasers and Founders under this Article IV shall not apply to:

(a) Common Stock issued as a stock dividend to holders of Common Stock or upon any subdivision or combination of shares of Common Stock;

(b) the issuance of any shares of Common Stock upon conversion of outstanding shares of convertible preferred stock;

(c) up to 16,250,000 shares of Common Stock, either issued in the form of restricted stock awards or options exercisable for Common Stock (subject to appropriate adjustment for stock split, stock dividends, combinations and other similar recapitalizations affecting such shares), plus such additional number of shares as may be approved by both the Board of Directors of the Company and a majority of the non-employee directors of the Company, issued or issuable to officers, directors, consultants and employees of the Company or any subsidiary pursuant to any plan, agreement or arrangement approved by the Board of Directors of the Company;

(d) securities issued solely in consideration for the acquisition (whether by merger or otherwise) by the Company or any of its subsidiaries of all or substantially all of the stock or assets of any other entity; or

(e) shares of Common Stock sold by the Company in an underwritten public offering pursuant to an effective registration statement under the Securities Act.

ARTICLE V
GENERAL

1. TERMINATION. Article II and Article IV of this Agreement shall terminate in their entirety with respect to any one or more applicable series of the Company's Preferred Stock upon the earlier of (a) an Acquisition (as defined below), or (b) the closing of an Initial Public Offering, or (c) the redemption of all Shares. An "ACQUISITION" shall mean any (i) merger or consolidation which results in the voting securities of the Company outstanding immediately prior thereto representing

immediately thereafter (either by remaining outstanding or by being converted into voting securities of the surviving or acquiring entity) less than a majority of the combined voting power of the voting securities of the Company or such surviving or acquiring entity outstanding immediately after such merger or consolidation, (ii) sale of all or substantially all the assets of the Company or (iii) sale of shares of capital stock of the Company, in a single transaction or series of related transactions, representing at least 80% of the voting power of the voting securities of the Company.

2. TRANSFER OF RIGHTS.

(a) This Agreement, and the rights and obligations of a Series A Purchaser hereunder, may be assigned by such Series A Purchaser to any person or entity to which at least 355,000 Shares, as adjusted for stock splits, stock dividends, recapitalizations and similar events (or 100% of the Shares originally purchased by such Purchaser under the Series A Preferred Stock Purchase Agreement of November 18, 1997, if less than 355,000 Shares), are transferred by such Purchaser, and such transferee shall be deemed an "Series A Purchaser" for purposes of this Agreement; PROVIDED that the transferee provides written notice of such assignment to the Company and agrees to be bound by the terms and conditions set forth herein.

(b) This Agreement, and the rights and obligations of a Series B Purchaser hereunder, may be assigned by such Series B Purchaser to any person or entity to which at least 157,214 Shares, as adjusted for stock splits, stock dividends, recapitalizations and similar events (or 100% of the Shares originally purchased by such Series B Purchaser under the Series B Preferred Stock Purchase Agreement of September 23, 1998, if less than 157,214 Shares), are transferred by such Series B Purchaser, and such transferee shall be deemed an "Series B Purchaser" for purposes of this Agreement; PROVIDED that the transferee provides written notice of such assignment to the Company and agrees to be bound by the terms and conditions set forth herein.

(c) This Agreement, and the rights and obligations of a Series C Purchaser hereunder, may be assigned by such Series C Purchaser to any person or entity to which at least 107,563 Shares, as adjusted for stock splits, stock dividends, recapitalizations and similar events (or 100% of the Shares originally purchased by such Series C Purchaser under the Series C Preferred Stock Purchase Agreement of September 10, 1999, if less than 107,563 Shares), are transferred by such Series C Purchaser, and such transferee shall be deemed an "Series C Purchaser" for purposes of this Agreement; PROVIDED that the transferee provides written notice of such assignment to the Company and agrees to be bound by the terms and conditions set forth herein.

(d) This Agreement, and the rights and obligations of a Series D Purchaser hereunder, may be assigned by such Series D Purchaser to any affiliate of or fund managed by such Series D Purchaser without restriction or to any person or entity to which at least 237,805 Shares, as adjusted for stock splits, stock dividends, recapitalizations and similar events (or 100% of the Shares originally purchased by such Series D Purchaser under the Purchase Agreement, if less than 237,805 Shares), are

transferred by such Series D Purchaser, and such transferee shall be deemed a "Series D Purchaser" for purposes of this Agreement; PROVIDED that the transferee provides written notice of such assignment to the Company and agrees to be bound by the terms and conditions set forth herein.

3. SEVERABILITY. The provisions of this Agreement are severable, so that the invalidity or unenforceability of any provision of this Agreement shall not affect the validity or enforceability of any other term or provision of this Agreement, which shall remain in full force and effect.

4. SPECIFIC PERFORMANCE. In addition to any and all other remedies that may be available at law in the event of any breach of this Agreement, the Purchasers and the Founders shall be entitled to specific performance of the agreements and obligations of the other parties hereunder and to such other injunctive or other equitable relief as may be granted by a court of competent jurisdiction.

5. GOVERNING LAW. This Agreement shall be governed by, and construed and enforced in accordance with, the laws of the State of Delaware (without reference to the conflicts of law provisions thereof).

6. NOTICES. All notices, requests, consents, and other communications under this Agreement shall be in writing and shall be delivered by hand, sent via a reputable nationwide overnight courier service or mailed by first class certified or registered mail, return receipt requested, postage prepaid:

If to the Company, at Sonus Networks, Inc., 5 Carlisle Road, Westford, MA 01886, Attn: President, or at such other address or addresses as may have been furnished in writing by the Company to the Purchasers, with a copy to Bingham Dana LLP, Boston, MA 02110, Attn: David L. Engel, Esq.;

If to a Purchaser, at its address as set forth the signature pages hereto, or at such other address or addresses as may have been furnished to the Company in writing by such Purchaser, with a copy to Gibson, Dunn & Crutcher LLP, Attn: Peter Heilmann, Esq.; or

If to a Founder, at his address as set forth on the signature page hereto, or at such other address or addresses as may have been furnished by such Founder to the Company and the Purchasers.

Notices provided in accordance with this Article V, Section 6 shall be deemed delivered upon personal delivery, one business day after being sent via a reputable nationwide overnight courier service, or five business days after deposit in the mail.

7. COMPLETE AGREEMENT; AMENDMENTS.

(a) This Agreement constitutes the full and complete agreement of the parties hereto with respect to the subject matter hereof and supercedes the Original Agreement, the Restated Agreement and the Second Restated Agreement in their entirety.

(b) This Agreement may be amended and the observance of any term of this Agreement may be waived (either generally or in a particular instance and either retroactively or prospectively) at any time by a written instrument signed by the Company, Purchasers holding at least 66 2/3% of the shares of Common Stock issued or issuable upon conversion of the Shares, and, with respect to any amendment to Article II, Founders holding a majority, by voting power, of the shares of capital stock of the Company held by Founders then employed by the Company, provided that no consent shall be required for an amendment pursuant to Section 11 below. No waivers of or exceptions to any term, condition or provision of this Agreement, in any one or more instances, shall be deemed to be, or construed as, a further or continuing waiver of any such term, condition or provision.

8. PRONOUNS. Whenever the content may require, any pronouns used in this Agreement shall include the corresponding masculine, feminine or neuter forms, and the singular form of nouns and pronouns shall include the plural, and vice versa.

9. COUNTERPARTS. This Agreement may be executed in any number of counterparts, each of which shall be deemed to be an original, and all of which together shall constitute one Agreement binding on all the parties hereto.

10. CAPTIONS. Captions of sections have been added only for convenience and shall not be deemed to be a part of this Agreement.

11. ADDITION OF PURCHASERS. Each purchaser of Series A Preferred Stock of the Company under the Series A Preferred Stock Purchase Agreement of November 18, 1997 shall become a party to and a Series A Purchaser under this Agreement upon its execution of a counterpart signature page to this Agreement. Each purchaser of Series B Preferred Stock of the Company under the Series B Preferred Stock Purchase Agreement of September 23, 1998 shall become a party to and a Series B Purchaser under this Agreement upon its execution of a counterpart signature page to this Agreement. Each purchaser of Series C Preferred Stock of the Company under the Series C Preferred Stock Purchase Agreement of September 10, 1999 shall become a party to and a Series C Purchaser under this Agreement upon its execution of a counterpart signature page to this Agreement. Each purchaser of Series D Preferred Stock of the Company under the Purchase Agreement shall become a party to and a Series D Purchaser under this Agreement upon the closing of its purchase of Series D Preferred Stock thereunder and its execution of a counterpart signature page to this Agreement.

IN WITNESS WHEREOF, this Agreement has been executed as an instrument under seal as of the date first above written.

COMPANY

Sonus Networks, Inc.

By: /s/ Hassan Ahmed

Hassan Ahmed
President

FOUNDERS:

/s/ Rubin Gruber

Rubin Gruber
709 Sudbury Road
Concord, MA 01742

/s/ Michael G. Hluchyj

Michael G. Hluchyj
27 Jackson Road
Wellesley, MA 02181

/s/ Kwok P. Wong

Kwok P. Wong
22 Thoreau Road
Lexington, MA 02173

/s/ Hassan Ahmed

Hassan Ahmed
3 Andover Country Club Lane
North Andover, MA 01810

PURCHASERS:

BroadBand Office, Inc.
2900 Telestar Court
Falls Church, VA 22042

By: /s/ Johnson Agogbua

Name: Johnson Agogbua
Title: Vice President, Engineering

Credit Suisse First Boston Venture Fund I, L.P.
2400 Hanover Street
Palo Alto, CA

By: QBB Management I, LLC, its General Partner

By: /s/ Frank Quattrone

Name: Frank Quattrone
Title: Member

Time Warner Telecom Inc.
10475 Park Meadows Drive
Suite 4400
Littleton, CO 80124

By: /s/ Paul B. Jones

Name: Paul B. Jones
Title: Senior Vice President
General Counsel & Regulatory Policy

ICI Capital LLC
3625 Queen Palm Drive
Tampa, FL 33611

By: /s/ Raymond L. Lawless

Name: Raymond L. Lawless
Title: Vice President and Treasurer

Williams Communications, Inc.
One Williams Center
Tulsa, OK 74172

By: /s/ Dell B. [ILLEGIBLE]

Name:
Title:

Global Crossing Ventures, Inc.
141 Caspian Court
Sunnyvale, CA 94089

By: /s/ Michael Cohen

Name:
Title:

Z-Tel Technologies, Inc.
601 S. Harbour Island Blvd.
Suite 220
Tampa, FL 33602

By: /s/ Eduard J. Mayer

Name: Eduard J. Mayer
Title: President

Tailwind Capital Partners 2000, L.P.
c/o Thomas Weisel Partners
One Montgomery Street, Suite 3700
San Francisco, CA 94104

By: Thomas Weisel Capital Partners LLC,
its General Partner

By: /s/ Marianne Winkler

Name: Marianne Winkler
Title: CFO

Hambrecht & Quist California
One Bush Street
San Francisco, CA 94104

By: /s/ Thomas Szymoniak

Name: Thomas Szymoniak
Title: Attorney-in-Fact

Hambrecht & Quist California
One Bush Street
San Francisco, CA 94104

By: /s/ Thomas Szymoniak

Name: Thomas Szymoniak
Title: Attorney-in-Fact

H&Q Employee Venture Fund 2000, L.P.
One Bush Street
San Francisco, CA 94104

By: H&Q Venture Management LLC, its General Partner

By: /s/ Thomas Szymoniak

Name: Thomas Szymoniak
Title: Attorney-in-Fact

Access Technology Partners, L.P.
One Bush Street
San Francisco, CA 94104

By: Access Technology Management LLC, its General Partner

By: /s/ Thomas Szymoniak

Name: Thomas Szymoniak
Title: Attorney-in-Fact

Access Technology Partners Brokers Fund, L.P.
One Bush Street
San Francisco, CA 94104

By: H&Q Venture Management, LLC, its General Partner

By: /s/ Thomas Szymoniak

Name: Thomas Szymoniak
Title: Attorney-in-Fact

Viatel, Inc.
685 Third Avenue,
New York, NY 10017

By: /s/ Sheldon M. Goldman

Name: Sheldon M. Goldman
Title: EVP

VYTL, LLC
685 Third Avenue,
New York, NY 10017

By: /s/ Sheldon M. Goldman

Name: Sheldon M. Goldman
Title:

Eagle Teleprograms, Inc.
60 East 56th Street
New York, NY 10022

By: /s/ Kent Srikanth Chargundla

Name: Kent Srikanth Chargundla
Title: Chairman

U.S. Bancorp Piper Jaffray ECM Fund I, LLC
22 South Ninth Street
Minneapolis, MN 55402

By: /s/ John Jacobs

Name: John Jacobs
Title: Managing Member

GD&C Partners 2000 Fund, LLC
333 South Grand Avenue
Los Angeles, CA 90071

By: /s/ [ILLEGIBLE]

Name:
Its: Manager

River Partners I
c/o Tim Walsh
1221 Avenue of the Americas
New York, NY 10020

By: /s/ Tim Walsh

Name: Tim Walsh
Title: Managing Director

Carrier 1
_____
_____
_____

By:

Name:
Title:

Whitman Partners, L.P.
_____
_____

By: /s/ [ILLEGIBLE]

Name:
Title: Manager

SERIES A PURCHASERS, SERIES B PURCHASERS AND SERIES C PURCHASERS:

North Bridge Venture Partners II, L.P.
950 Winter Street, Suite 4600
Waltham, MA 02451

By: North Bridge Venture Management II, L.P.,
its General Partner

By: /s/ Edward T. Anderson

Edward T. Anderson
General Partner

North Bridge Venture Partners III, L.P.
950 Winter Street, Suite 4600
Waltham, MA 02451

By: North Bridge Venture Management III, L.P.,
its General Partner

By: /s/ Edward T. Anderson

Edward T. Anderson
General Partner

Matrix Partners V, L.P.
Bay Colony Corporate Center
1000 Winter Street, Suite 4500
Waltham, MA 02154

By: Matrix V Management Co., LLC,
its General Partner

By: /s/ Paul J. Ferri

Name:
Title:

Matrix V Entrepreneurs Fund, L.P.
Bay Colony Corporate Center
1000 Winter Street, Suite 4500
Waltham, MA 02154

By: Matrix V Management Co., LLC,
its General Partner

By: /s/ Paul J. Ferri

Name:
Title:

Charles River Partnership VIII,
A Limited Partnership
1000 Winter Street, Suite 3300
Waltham, MA 02154

By: Charles River VIII GP Limited Partnership,
its General Partner

By: /s/ Richard M. Burnes

Richard M. Burnes
General Partner

Charles River VIII-A LLC
1000 Winter Street, Suite 3300
Waltham, MA 02154

By: Charles River Friends VII, Inc.,
its Manager

By: /s/ Richard M. Burns

Name:
Title:

Bedrock Capital Partners I, L.P.
c/o Volpe Brown Whelan & Company LLC
One Boston Place
Suite 3310
Boston, MA 02108

By: Bedrock General Partner I, LLC, General Partner

By: /s/ J.M. [ILLEGIBLE]

Name:
Title:

VBW Employee Bedrock Fund, L.P.
c/o Volpe Brown Whelan & Company LLC
One Boston Place
Suite 3310
Boston, MA 02108

By: Bedrock General Partner I, LLC, General Partner

By: /s/ J.M. [ILLEGIBLE]

Name:
Title:

Credit Suisse First Boston Bedrock Fund, L.P.
c/o Volpe Brown Whelan & Company LLC
One Boston Place
Suite 3310
Boston, MA 02108

By: Bedrock General Partner I, L.P.
Title: Attorney-in-Fact

By: /s/ J.M. [ILLEGIBLE]

Name:
Title:

THIRD AMENDED AND RESTATED
RIGHT OF FIRST REFUSAL AND CO-SALE AGREEMENT

This Third Amended and Restated Right of First Refusal and Co-Sale Agreement (this "AGREEMENT"), dated as of March 9, 2000, is entered into by and among Sonus Networks, Inc., a Delaware corporation (the "COMPANY"), the persons and entities listed on the signature pages hereto under the heading "Purchasers" (individually, a "PURCHASER" and, collectively, the "PURCHASERS"), and Hassan Ahmed, Rubin Gruber, Michael G. Hluchyj and Kwok P. Wong (individually, a "FOUNDER" and, collectively, the "FOUNDERS").

WHEREAS, on November 18, 1997, the Company, certain of the Purchasers (the "SERIES A PURCHASERS") and the Founders entered into a Right of First Refusal and Co-Sale Agreement (the "ORIGINAL AGREEMENT") to protect the management and control of the Company from influence by any person not acceptable to the Company and the Series A Purchasers and to assist the Series A Purchasers in selling their Shares (as defined below) if they so desired;

WHEREAS, in connection with the purchase and sale of 3,144,287 shares of Series B Convertible Preferred Stock, $0.01 par value per share, of the Company (the "SERIES B PREFERRED STOCK"), by certain of the Purchasers (the "SERIES B PURCHASERS"), the Company and the Series B Purchasers entered into an Amended and Restated Right of First Refusal and Co-Sale Agreement, dated as of September 23, 1998 (the "RESTATED AGREEMENT"); and

WHEREAS, in connection with the purchase and sale of 1,939,681 shares of Series C Convertible Preferred Stock, $0.01 par value per share, of the Company (the "SERIES C PREFERRED STOCK"), by certain of the Purchasers (the "SERIES C PURCHASERS"), the Company and the Series C Purchasers entered into a Second Amended and Restated Right of First Refusal and Co-Sale Agreement, dated as of September 10, 1999 (the "SECOND RESTATED AGREEMENT"); and

WHEREAS, in connection with the purchase and sale of up to 1,585,366 shares of Series D Convertible Preferred Stock, $.01 par value per share, of the Company (the "SERIES D PREFERRED STOCK"), by certain of the Purchasers (the "SERIES D PURCHASERS"), the parties hereto desire to amend and restate the Second Restated Agreement so that the Series D Purchasers have substantially the same rights and obligations the Series A Purchasers, the Series B Purchasers and the Series C Purchasers had under the Second Restated Agreement, respectively (the terms of this Agreement to supersede the terms of the Second Restated Agreement in their entirety).

NOW, THEREFORE, for valuable consideration, it is agreed as follows:

1. RESTRICTIONS ON TRANSFER.

1.1 Any sale, assignment, transfer or other disposition, whether voluntarily or by operation of law (collectively, "TRANSFER"), of any of the Shares (as defined below) by a Founder other than according to the terms of this Agreement, shall be void and shall transfer no right, title, or interest in or to any of such Shares to the purported transferee. As used in this Agreement, the term "SHARES" shall include all shares of capital stock of the Company held by the Founders or the Purchasers, whether now owned or hereafter acquired. For purposes of

calculating a Purchaser's pro rata ownership of Shares, all shares of Series A Convertible Preferred Stock, $0.01 par value per share ("SERIES A PREFERRED STOCK"), Series B Preferred Stock, Series C Preferred Stock or Series D Preferred Stock of the Company shall be deemed to have been converted into shares of Common Stock of the Company.

1.2 Each Founder has presented or agrees to present the certificates representing the Shares presently owned or hereafter acquired by him to the Secretary of the Company and cause the Secretary to stamp on the certificate in a prominent manner the following legend:

> "The sale or other disposition of any of the shares represented by this certificate is restricted by a Right of First Refusal and Co-Sale Agreement among certain of the shareholders of this Corporation and this Corporation (the "Agreement"). A copy of the Agreement is available for inspection by a prospective purchaser without charge at the office of the Secretary of the Corporation."

2. TRANSFERS NOT SUBJECT TO RESTRICTIONS.

A Founder may Transfer (i) any or all of his Shares to his parents, spouse, children, stepchildren, grandchildren, siblings, brothers- or sisters-in-law, cousins, nieces or nephews, or spouse of any such person, or to a trust or similar estate- or tax-planning vehicle (including a family limited partnership or a family limited liability company) established for the benefit of any one or more of his parents, spouse, children, stepchildren, grandchildren, siblings, brothers- or sisters-in-law, cousins, nieces or nephews, or spouse of any such person, or himself or (ii) any or all of his Shares under his will, without compliance with Sections 3 through 6 hereof; PROVIDED in the case of each such Transfer that (i) the transferee delivers a written instrument to the other parties hereto agreeing to be bound by the terms hereof as if it were a Founder and (ii) the transferee grants its proxy to vote such shares to such Founder or a legal representative of such Founder, PROVIDED, HOWEVER, that such proxy need not be granted if such action would have an adverse tax consequence on the Founder or the transferee.

3. OFFER OF TRANSFER; NOTICE OF PROPOSED TRANSFER.

If a Founder desires to Transfer any of his Shares, or any interest in such Shares, in any transaction other than pursuant to Section 2 of this Agreement, such Founder (a "SELLING STOCKHOLDER") shall first deliver written notice of his desire to do so (the "NOTICE") to the Company and each Purchaser, in the manner prescribed in Section 9.4 of this Agreement. The Notice must specify: (i) the name and address of the party to which the Selling Stockholder proposes to Transfer the Shares or an interest in the Shares (the "Offeror"), (ii) the number of Shares the Selling Stockholder proposes to Transfer (the "OFFERED SHARES"), (iii) the consideration per Share to be delivered to the Selling Stockholder for the proposed Transfer, and (iv) all other material terms and conditions of the proposed transaction.

4. COMPANY'S OPTION TO PURCHASE.

4.1 The Company shall have the first option to purchase all or any part of the Offered Shares for the consideration per share and on the terms and conditions specified in the Notice. The Company must exercise such option, no later than 15 days after such Notice is

deemed under Section 9.4 hereof to have been delivered to it, by written notice to the Selling Stockholder.

4.2 In the event the Company does not exercise its option within such 15-day period with respect to all of the Offered Shares, the Secretary of the Company shall, by the last day of such period, give written notice of that fact to each Purchaser (the "COMPANY NOTICE"). The Company Notice shall specify the number of Offered Shares not purchased by the Company (the "REMAINING SHARES").

4.3 In the event the Company duly exercises its option to purchase all or part of the Offered Shares, the closing of such purchase shall take place at the offices of the Company on the later of (i) the date five days after the expiration of such 15-day period or (ii) the date that the Purchasers consummate their purchase of Offered Shares under Section 5 hereof.

4.4 To the extent that the consideration proposed to be paid by the Offeror for the Offered Shares consists of property other than cash or a promissory note, the consideration required to be paid by the Company and/or the Purchasers exercising their options under Sections 4 and 5 hereof may consist of cash equal to the value of such property, as determined in good faith by agreement of the Selling Stockholder and the Company and/or the Purchasers acquiring such Offered Shares.

4.5 Notwithstanding anything to the contrary herein, neither the Company nor the Purchasers shall have any right to purchase any of the Offered Shares hereunder unless the Company and/or the Purchasers exercise their option or options to purchase all of the Offered Shares.

5.PURCHASERS' OPTION TO PURCHASE.

5.1 Each Purchaser and Founder other than the Selling Stockholder shall have an option, exercisable for a period of 15 days from the date of delivery of the Company Notice, to purchase its pro rata share of the Remaining Shares for the consideration per share and on the terms and conditions set forth in the Notice. Such option shall be exercised by delivery of written notice to the Secretary of the Company. Alternatively, if the Selling Stockholder is a Significant Selling Stockholder (as defined below), each Purchaser and Founder other than the Selling Stockholder may within the same 15-day period notify the Secretary of the Company and the Significant Selling Stockholder of its desire to participate in the sale of the Shares on the terms set forth in the Notice, and the number of Shares it proposes to sell. A "SIGNIFICANT SELLING STOCKHOLDER" shall mean any Founder who (together with his parents, spouse, children, stepchildren, grandchildren, siblings, brothers- or sisters-in-law, cousins, nieces or nephews, or spouse of any such person, and any trust or similar estate- or tax-planning vehicle (including a family limited partnership or a family limited liability company) established for the benefit of any one or more of his parents, spouse, children, stepchildren, grandchildren, siblings, brothers- or sisters-in-law, cousins, nieces or nephews, or spouse of any such person, or himself) owns, after giving effect to the conversion of all convertible preferred stock into Common Stock, at least 1,000,000 shares of Common Stock (subject to appropriate adjustment for stock splits, stock dividends, combinations and other similar recapitalizations affecting such shares).

5.2 In the event options to purchase have been exercised by Purchasers and Founders with respect to some but not all of the Remaining Shares, those Purchasers and Founders who have exercised their options within the 15-day period specified in Section 5.1 shall have an additional option, for a period of five days next succeeding the expiration of such 15-day period, to purchase all or any part of the balance of such Remaining Shares on the terms and conditions set forth in the Notice, which option shall be exercised by the delivery of written notice to the Secretary of the Company. In the event there are two or more such Purchasers and Founders that choose to exercise the last-mentioned option for a total number of Shares in excess of the number available, the Shares available for each such Purchaser's and Founder's option shall be allocated to such Purchaser and Founder pro rata based on the number of Shares owned by the Purchasers and Founders so electing.

5.3 If the options to purchase the Remaining Shares are exercised in full by the Purchasers and Founders, the Secretary of the Company shall promptly notify all of the exercising Purchasers and Founders of that fact. The closing of the purchase of the Remaining Shares shall take place at the offices of the Company no later than five days after the date of such notice to the Purchasers.

6. FAILURE TO FULLY EXERCISE OPTIONS; CO-SALE.

6.1 If the Company and the Purchasers and Founders do not exercise their options to purchase all of the Offered Shares within the periods described in this Agreement (the "OPTION PERIOD"), then all options of the Company and the Purchasers and Founders to purchase the Offered Shares, whether exercised or not, shall terminate; but each Purchaser and Founder who has, pursuant to Section 5, expressed a desire to sell Shares in the transaction ("PARTICIPANTS") shall be entitled to do so pursuant to this Section. The Secretary of the Company shall promptly, upon expiration of the Option Period, notify the Significant Selling Stockholder of the aggregate number of Shares the Participants wish to sell. The Significant Selling Stockholder shall use his or its best efforts to interest the Offeror in purchasing, in addition to the Offered Shares, the Shares the Participants wish to sell. If the Offeror does not wish to purchase all of the Shares made available by the Significant Selling Stockholder and the Participants, then each Participant and the Significant Selling Stockholder shall be entitled to sell, at the price and on the terms and conditions set forth in the Notice, a portion of the Shares being sold to the Offeror, in the same proportion as the Significant Selling Stockholder or such Participant's ownership of Shares bears to the aggregate number of Shares owned by the Significant Selling Stockholder and the Participants. The transaction contemplated by the Notice shall be consummated not later than 60 days after the expiration of the Option Period.

6.2 The Selling Stockholder shall be entitled to sell to the Offeror, according to the terms set forth in the Notice, that number of his Shares which equals the difference between the number of Shares desired to be purchased by the Offeror and (if applicable) the number of Shares the Participants wish to sell in accordance with the provisions of Section 6.1 hereof. If the Selling Stockholder wishes to Transfer any such Shares at a price per Share which differs from that set forth in the Notice, upon terms different from those previously offered to the Company and the Purchasers and Founders, or more than 60 days after the expiration of the Option Period, then, as a condition precedent to such transaction, such Shares must first be offered to the Company and the Purchasers and Founders on the same terms and conditions as given the Offeror, and in accordance with the procedures and time periods set forth above.

6.3 The proceeds of any sale made by the Selling Stockholder without compliance with the provisions of this Section 6 shall be deemed to be held in constructive trust in such amount as would have been due the Purchasers and Founders if the Selling Stockholder had complied with this Agreement. The contents of any such trust shall be delivered to the Purchasers and Founders upon surrender of the applicable Shares to the Selling Stockholder.

7. TERMINATION OF AGREEMENT.

7.1 This Agreement shall terminate upon the earlier of the following events:

(a) Any (i) merger or consolidation which results in the voting securities of the Company outstanding immediately prior thereto representing immediately thereafter (either by remaining outstanding or by being converted into voting securities of the surviving or acquiring entity) less than a majority of the combined voting power of the voting securities of the Company or such surviving or acquiring entity outstanding immediately after such merger or consolidation, (ii) sale of all or substantially all the assets of the Company or (iii) sale of shares of capital stock of the Company, in a single transaction or series of related transactions, representing at least 80% of the voting power of the voting securities of the Company;

(b) The closing of the sale of shares of Common Stock in a firm commitment underwritten public offering pursuant to a Registration Statement at a price to the public of at least $19.68 per share (adjusted for stock splits, stock dividends and similar events) resulting in proceeds to the Company (net of the underwriting discounts and commissions and offering expenses) of at least $25,000,000; or

(c) The redemption of all shares of Series A Preferred Stock, Series B Preferred Stock, Series C Preferred Stock and Series D Preferred Stock.

7.2 The provisions of Sections 3, 4, 5 and 6 hereof shall not apply to sales of Shares pursuant to a transaction referred to in Sections 7.1(a) or 7.1(b) above.

8. TRANSFERS OF RIGHTS.

(a) This Agreement, and the rights and obligations of a Series A Purchaser hereunder, may be assigned by such Series A Purchaser to any person or entity to which at least 355,000 shares of Series A Preferred Stock, as adjusted for stock splits, stock dividends, recapitalizations and similar events (or 100% of the shares of Series A Preferred Stock originally purchased hereunder by such Series A Purchaser, if less than 355,000 shares), are transferred by such Series A Purchaser, and such transferee shall be deemed a "Series A Purchaser" for purposes of this Agreement; provided that the transferee provides written notice of such assignment to the Company and agrees to be bound by the terms and conditions set forth herein.

(b) This Agreement, and the rights and obligations of a Series B Purchaser hereunder, may be assigned by such Series B Purchaser to any person or entity to which at least 157,214 shares of Series B Preferred Stock, as adjusted for stock splits, stock dividends, recapitalizations and similar events (or 100% of the shares of Series B Preferred Stock originally

purchased hereunder by such Series B Purchaser, if less than 157,214 shares), are transferred by such Series B Purchaser, and such transferee shall be deemed a "Series B Purchaser" for purposes of this Agreement; provided that the transferee provides written notice of such assignment to the Company and agrees to be bound by the terms and conditions set forth herein.

(c) This Agreement, and the rights and obligations of a Series C Purchaser hereunder, may be assigned by such Series C Purchaser to any person or entity to which at least 107,653 shares of Series C Preferred Stock, as adjusted for stock splits, stock dividends, recapitalizations and similar events (or 100% of the shares of Series C Preferred Stock originally purchased hereunder by such Series C Purchaser, if less than 107,653 shares), are transferred by such Series C Purchaser, and such transferee shall be deemed a "Series C Purchaser" for purposes of this Agreement; provided that the transferee provides written notice of such assignment to the Company and agrees to be bound by the terms and conditions set forth herein.

(d) This Agreement, and the rights and obligations of a Series D Purchaser hereunder, may be assigned by such Series D Purchaser to any affiliate of or fund managed by such Series D Purchaser without restriction or to any person or entity to which at least 237,805 shares of Series D Preferred Stock, as adjusted for stock splits, stock dividends, recapitalizations and similar events (or 100% of the shares of Series D Preferred Stock originally purchased hereunder by such Series D Purchaser, if less than 237,805 shares), are transferred by such Purchaser, and such transferee shall be deemed a "Series D Purchaser" for purposes of this Agreement; provided that the transferee provides written notice of such assignment to the Company and agrees to be bound by the terms and conditions set forth herein.

9. GENERAL.

9.1 SEVERABILITY. The provisions of this Agreement are severable, so that the invalidity or unenforceability of any provision of this Agreement shall not affect the validity or enforceability of any other term or provision of this Agreement, which shall remain in full force and effect.

9.2 SPECIFIC PERFORMANCE. In addition to any and all other remedies that may be available at law in the event of any breach of this Agreement, the Purchasers shall be entitled to specific performance of the agreements and obligations of the Company and the Founders hereunder and to such other injunctive or other equitable relief as may be granted by a court of competent jurisdiction.

9.3 GOVERNING LAW. This Agreement shall be governed by, and construed and enforced in accordance with, the laws of the State of Delaware.

9.4 NOTICES. All notices, requests, consents, and other communications under this Agreement shall be in writing and shall be delivered by hand, sent via a reputable nationwide overnight courier service or mailed by first class certified or registered mail, return receipt requested, postage prepaid:

If to the Company, at 5 Carlisle Road, Westford, MA 01886, Attn: President, or at such other address or addresses as may have been furnished in writing by the Company to the

Purchasers, with a copy to Bingham Dana LLP, 150 Federal Street, Boston, MA 02110, Attn: David L. Engel, Esq.;

If to a Purchaser, at its address as set forth the signature pages hereto, or at such other address or addresses as may have been furnished to the Company in writing by such Purchaser, with a copy to Gibson, Dunn & Crutcher LLP, Attn: Peter Heilmann, Esq.; or

If to a Founder, at his address as set forth on the signature page hereto or at such other address or addresses as may have been furnished to the Company and the Purchasers in writing by such Founder.

Notices provided in accordance with this Section 9.4 shall be deemed delivered upon personal delivery, one business day after being sent via a reputable nationwide overnight courier service, or five business days after deposit in the mail.

9.5 COMPLETE AGREEMENT; AMENDMENTS.

(a) This Agreement constitutes the full and complete agreement of the parties hereto with respect to the subject matter hereof and supercedes the Second Restated Agreement in its entirety. Notwithstanding the foregoing, each Founder acknowledges that he is a party to a Stock Restriction Agreement with the Company which imposes restrictions on the transfer of the shares issued thereunder and a purchase option in favor of the Company which are in addition the transfer restrictions and purchase rights set forth herein.

(b) No amendment, modification, termination or waiver (either general or in a particular instance and either prospective or retrospective) of any provision of this Agreement shall be valid unless in writing and signed by the Company, Founders holding at least a majority by voting power of the shares of capital stock held by the Founders, and the Purchasers holding at least 66 2/3% of the shares of Common Stock issued or issuable upon conversion of the shares of Series A Preferred Stock, Series B Preferred Stock, Series C Preferred Stock and Series D Preferred Stock held by the Purchasers, PROVIDED that no consent shall be required for an amendment pursuant to Sections 9.9 or 9.10 below.

9.6 PRONOUNS. Whenever the content may require, any pronouns used in this Agreement shall include the corresponding masculine, feminine or neuter forms, and the singular form of nouns and pronouns shall include the plural, and vice versa.

9.7 COUNTERPARTS. This Agreement may be executed in any number of counterparts, each of which shall constitute one Agreement binding on all the parties hereto.

9.8 CAPTIONS. Captions of sections have been added only for convenience and shall not be deemed to be a part of this Agreement.

9.9 ADDITION OF PURCHASERS. Each purchaser of Series A Preferred Stock of the Company under the Series A Preferred Stock Purchase Agreement of November 18, 1997 shall become a party to and a Series A Purchaser under this Agreement upon its execution of a counterpart signature page to this Agreement. Each purchaser of Series B Preferred Stock of the Company under the Series B Preferred Stock Purchase Agreement of September 23, 1998 shall

become a party to and a Series B Purchaser under this Agreement upon the execution of a counterpart signature page to this Agreement. Each purchaser of Series C Preferred Stock of the Company under the Series C Preferred Stock Purchase Agreement of September 10, 1999 shall become a party to and a Series C Purchaser under this Agreement upon the execution of a counterpart signature page to this Agreement. Each purchaser of Series D Preferred Stock of the Company under the Series D Preferred Stock Purchase Agreement of even date herewith shall become a party to and a Series D Purchaser under this Agreement upon the closing of its purchase of Series D Preferred Stock thereunder and its execution of a counterpart signature page to this Agreement.

9.10 ADDITIONAL PARTIES. The Company expects that it may issue Common Stock, in the form of restricted stock, to additional key employees of the Company (the "ADDITIONAL FOUNDERS"). The Company shall require that such Additional Founder become a party to this Agreement by executing a counterpart signature page hereto. The parties to this Agreement agree that, upon execution by each Additional Founder of a counterpart signature page hereto, such Additional Founder shall become a party hereto and shall be deemed a "Founder" for all purposes hereof. Following the execution by an Additional Founder of a counterpart signature page hereto, the Company shall promptly deliver to the other parties hereto notice that such Additional Founder has become a party hereto (which notice shall specify the number of shares of Common Stock issued to such Additional Founder).

IN WITNESS WHEREOF, this Agreement has been executed as an instrument under seal as of the date first above written.

COMPANY

Sonus Networks, Inc.

By: /s/ Hassan Ahmed

Hassan Ahmed
President

FOUNDERS:

/s/ Rubin Gruber

Rubin Gruber
709 Sudbury Road
Concord, MA 01742

/s/ Michael G. Hluchyj

Michael G. Hluchyj
27 Jackson Road
Wellesley, MA 02181

/s/ Kwok P. Wong

Kwok P. Wong
22 Thoreau Road
Lexington, MA 02173

/s/ Hassan Ahmed

Hassan Ahmed
3 Andover Country Club Lane
North Andover, MA 01810

PURCHASERS:

BroadBand Office, Inc.
2900 Telestar Court
Falls Church, VA 22042

By: /s/ Johnson Agogbua

Name: Johnson Agogbua
Title: Vice President, Engineering

Credit Suisse First Boston Venture Fund I, L.P.
2400 Hanover Street
Palo Alto, CA

By: QBB Management I, LLC, its General Partner

By: /s/ Frank Quattrone

Name: Frank Quattrone
Title: Member

Time Warner Telecom Inc.
10475 Park Meadows Drive
Suite 4400
Littleton, CO 80124

By: /s/ Paul B. Jones

Name: Paul B. Jones
Title: Senior Vice President
General Counsel & Regulatory Policy

ICI Capital LLC
3625 Queen Palm Drive
Tampa, FL 33611

By: /s/ Raymond L. Lawless

Name: Raymond L. Lawless
Title: Vice President and Treasurer

Williams Communications, Inc.
One Williams Center
Tulsa, OK 74172

By: /s/ Dell [ILLEGIBLE]

Name:
Title:

Global Crossing Ventures, Inc.
141 Caspian Court
Sunnyvale, CA 94089

By: /s/ Michael Cohen

Name:
Title:

Z-Tel Technologies, Inc.
601 S. Harbour Island Blvd.
Suite 220
Tampa, FL 33602

By: /s/ Eduard J. Mayer

Name: Eduard J. Mayer
Title: President

Tailwind Capital Partners 2000, L.P.
c/o Thomas Weisel Partners
One Montgomery Street, Suite 3700
San Francisco, CA 94104

By: Thomas Weisel Capital Partners LLC,
its General Partner

By: /s/ Marianne Winkler

Name: Marianne Winkler
Title: CFO

Hambrecht & Quist California

One Bush Street
San Fransisco, CA 94104

By: /s/ Thomas Szymoniak

Name: Thomas Szymoniak
Title: Attorney-in-Fact

Hambrecht & Quist California

One Bush Street
San Fransisco, CA 94104

By: /s/ Thomas Szymoniak

Name: Thomas Szymoniak
Title: Attorney-in-Fact

H&Q Employee Venture Fund 2000, L.P.

One Bush Street
San Fransisco, CA 94104

By: H&Q Venture Management LLC, its General Partner

By: /s/ Thomas Szymoniak

Name: Thomas Szymoniak
Title: Attorney-in-Fact

Access Technology Partners, L.P.

One Bush Street
San Fransisco, CA 94104

By: Access Technology Management LLC, its General Partner

By: /s/ Thomas Szymoniak

Name: Thomas Szymoniak
Title: Attorney-in-Fact

Access Technology Partners Brokers Fund, L.P.

One Bush Street
San Fransisco, CA 94104

By: H&Q Venture Management, LLC, its General Partner

By: /s/ Thomas Szymoniak

Name: Thomas Szymoniak
Title: Attorney-in-Fact

Viatel, Inc.
685 Third Avenue,
New York, NY 10017

By: /s/ Sheldon M. Goldman

Name: Sheldon M. Goldman
Title: EVP

VYTL, LLC
685 Third Avenue,
New York, NY 10017

By: /s/ Sheldon M. Goldman

Name: Sheldon M. Goldman
Title:

Eagle Teleprograms, Inc.

60 East 56th Street
New York, NY 10022

By: /s/ Kent Srikanth Chargundla

Name: Kent Srikanth Chargundla
Title: Chairman

U.S. Bancorp Piper Jaffray ECM Fund I, LLC
22 South Ninth Street
Minneapolis, MN 55402

By: /s/ John Jacobs

Name: John Jacobs
Title: Managing Member

GD&C Partners 2000 Fund, LLC
333 South Grand Avenue
Los Angeles, CA 90071

By: /s/ [ILLEGIBLE]

Name:
Its: Manager

River Partners I
c/o Tim Walsh
1221 Avenue of the Americas
New York, NY 10020

By: /s/ Tim Walsh

Name: Tim Walsh
Title: Managing Director

Carrier 1

By:

Name:
Title:

Whitman Partners, L.P.

By: /s/ [ILLEGIBLE]

Name:
Title:

SERIES A PURCHASERS, SERIES B PURCHASERS, AND SERIES C PURCHASERS;

North Bridge Venture Partners II, L.P.
950 Winter Street, Suite 4600
Waltham, MA 02451

By: North Bridge Venture Management II, L.P.,
its General Partner

By: /s/ Edward T. Anderson

Edward T. Anderson
General Partner

North Bridge Venture Partners III, L.P.
950 Winter Street, Suite 4600
Waltham, MA 02451

By: North Bridge Venture Management III, L.P.,
its General Partner

By: /s/ Edward T. Anderson

Edward T. Anderson
General Partner

Matrix Partners V, L.P.
Bay Colony Corporate Center
1000 Winter Street, Suite 4500
Waltham, MA 02154

By: Matrix V Management Co., LLC,
its General Partner

By: /s/ Paul J. Ferri

Name:
Title:

Matrix V Entrepreneurs Fund, L.P.
Bay Colony Corporate Center
1000 Winter Street, Suite 4500
Waltham, MA 02154

By: Matrix V Management Co., LLC,
its General Partner

By: /s/ Paul J. Ferri

Name:
Title:

Charles River Partnership VIII,
A Limited Partnership
1000 Winter Street, Suite 3300
Waltham, MA 02154

By: Charles River VIII GP Limited Partnership,
its General Partner

By: /s/ Richard M. Burnes

Richard M. Burnes
General Partner

Charles River VIII-A LLC
1000 Winter Street, Suite 3300
Waltham, MA 02154

By: Charles River Friends VII, Inc.,
its Manager

By: Richard M. Burns

Name:
Title:

Bedrock Capital Partners I, L.P.
c/o Volpe Brown Whelan & Company LLC
One Boston Place
Suite 3310
Boston, MA 02108

By: Bedrock General Partner I, LLC, General Partner

By: /s/ J.M. [ILLEGIBLE]

Name:
Title:

VBW Employee Bedrock Fund, L.P.
c/o Volpe Brown Whelan & Company LLC
One Boston Place
Suite 3310
Boston, MA 02108

By: Bedrock General Partner I, LLC, General Partner

By: /s/ J.M. [ILLEGIBLE]

Name:
Title:

Credit Suisse First Boston Bedrock Fund, L.P.
c/o Volpe Brown Whelan & Company LLC
One Boston Place
Suite 3310
Boston, MA 02108

By: Bedrock General Partner I, L.P.
Title: Attorney-in-Fact

By: /s/ J.M. [ILLEGIBLE]

Name:
Title:

Exhibit 10.10

LOAN AND SECURITY AGREEMENT

$1,500,000 EQUIPMENT LINE
PROVIDED BY
SILICON VALLEY BANK
TO
SONUS NETWORKS, INC.

March 6, 1998

This LOAN AND SECURITY AGREEMENT is entered into as of March 6,1998, by and between SILICON VALLEY BANK, a California-chartered bank with its principal place of business at 3003 Tasman Drive, Santa Clara, CA 95054 and with a loan production office located at Wellesley Office Park, 40 William Street, Suite 350, Wellesley, MA 02181, doing business under the name Silicon Valley East ("Bank"), and SONUS NETWORKS, INC., a Delaware corporation with its principal place of business at 5 Carlisle Road, Westford, Massachusetts 01886 ("Borrower").

RECITALS

Borrower wishes to obtain credit from time to time from Bank, and Bank desires to extend credit to Borrower. This Agreement sets forth the terms on which Bank will advance credit to Borrower, and Borrower will repay the amounts owing to Bank.

AGREEMENT

The parties agree as follows:

1. DEFINITIONS AND CONSTRUCTION

1.1 Definitions. As used in this Agreement, the following terms shall have the following definitions:

"Accounts" means all presently existing and hereafter arising accounts, contract rights, and all other forms of obligations owing to Borrower arising out of the sale or lease of goods (including, without limitation, the licensing of software and other technology) or the rendering of services by Borrower, whether or not earned by performance, and any and all credit insurance, guaranties, and other security therefor, as well as all merchandise returned to or reclaimed by Borrower and Borrower's Books relating to any of the foregoing.

"Affiliate" means, with respect to any Person, any Person that owns or controls directly or indirectly such Person, any Person that controls or is controlled by or is under common control with such Person, and each of such Person's senior executive officers, directors, partners and, for any Person that is a limited liability company, such Person's managers and members.

"Bank Expenses" means all reasonable costs or expenses (including reasonable attorneys' fees and expenses) incurred in connection with the preparation, negotiation, administration, and enforcement of the Loan Documents; and Bank's reasonable attorneys' fees and expenses incurred in amending, enforcing or defending the Loan Documents, (including fees and expenses of appeal or review, or those incurred in any Insolvency Proceeding) whether or not suit is brought.

"Borrower's Books" means all of Borrower's books and records including, without limitation: ledgers; records concerning Borrower's assets or liabilities, the Collateral, business operations or financial condition; and all computer programs or tape files containing such information.

"Business Day" means any day that is not a Saturday, Sunday, or other day on which banks in the State of California are authorized or required to close.

"Closing Date" means the date of this Agreement.

"Code" means the Massachusetts Uniform Commercial Code.

"Collateral" means the property described on Exhibit A attached hereto.

"Committed Equipment Line" means a credit extension of up to ONE MILLION FIVE HUNDRED THOUSAND Dollars ($1,500,000).

"Contingent Obligation" means, as applied to any Person, any direct or indirect liability, contingent or otherwise, of that Person with respect to (i) any indebtedness, lease, dividend, letter of credit or other obligation of another, including, without limitation, any such obligation directly or indirectly guaranteed, endorsed, co-made or discounted or sold with recourse by that Person, or in respect of which that Person is otherwise directly or indirectly liable; (ii) any obligations with respect to undrawn letters of credit issued for the account of that Person; and (iii) all obligations arising under any interest rate, currency or commodity swap agreement, interest rate cap agreement, interest rate collar agreement, or other agreement or arrangement designated to protect a Person against fluctuation in interest rates, currency exchange rates or commodity prices; provided, however, that the term "Contingent Obligation" shall not include endorsements for collection or deposit in the ordinary course of business. The amount of any Contingent Obligation shall be deemed to be an amount equal to the stated or determined amount of the primary obligation in respect of which such Contingent Obligation is made or, if not stated or determinable, the maximum reasonably anticipated liability in respect thereof as determined by such Person in good faith; provided, however, that such amount shall not in any event exceed the maximum amount of the obligations under the guarantee or other support arrangement.

"Credit Extension" means each Equipment Advance or any other extension of credit by Bank for the benefit of Borrower hereunder.

"Current Assets" means, as of any applicable date, all amounts that should, in accordance with GAAP, be included as current assets on the consolidated balance sheet of Borrower and its Subsidiaries as at such date.

"Current Liabilities" means, as of any applicable date, all amounts that should, in accordance with GAAP, be included as current liabilities on the consolidated balance sheet of Borrower and its Subsidiaries, as at such date, plus, to the extent not already included therein, all outstanding Credit Extensions made under this Agreement, including all Indebtedness that is payable upon demand or within one year from the date of determination thereof unless such Indebtedness is renewable or extendable at the option of Borrower or any Subsidiary to a date more than one year from the date of determination, but excluding Subordinated Debt.

"Equipment" means all present and future machinery, equipment, tenant improvements, furniture, fixtures, vehicles, tools, parts and attachments in which Borrower has any interest.

"Equipment Advance" has the meaning set forth in Section 2.1.1.

"ERISA" means the Employee Retirement Income Security Act of 1974, as amended, and the regulations thereunder.

"GAAP" means generally accepted accounting principles as in effect in the United States from time to time.

"Indebtedness" means (a) all indebtedness for borrowed money or the deferred purchase price of property or services, including without limitation reimbursement and other obligations with respect to surety bonds and letters of credit, (b) all obligations evidenced by notes, bonds, debentures or similar instruments, (c) all capital lease obligations and (d) all Contingent Obligations, but specifically excludes all redemption obligations of Borrower pursuant to its redeemable preferred stock, whether now or in the future authorized and outstanding.

"Insolvency Proceeding" means any proceeding commenced by or against any person or entity under any provision of the United States Bankruptcy Code, as amended, or under any other bankruptcy or insolvency law, including assignments for the benefit of creditors, formal or informal moratoria, compositions, extension generally with its creditors, or proceedings seeking reorganization, arrangement, or other relief.

"Inventory" means all present and future inventory in which Borrower has any interest, including merchandise, raw materials, parts, supplies, packing and shipping materials, work in process and finished products intended for sale or lease or to be furnished under a contract of service, of every kind and description now or at any time hereafter owned by or in the custody or possession, actual or constructive, of

Borrower, including such inventory as is temporarily out of its custody or possession or in transit and including any returns upon any accounts or other proceeds, including insurance proceeds, resulting from the sale or disposition of any of the foregoing and any documents of title representing any of the above.

"Investment" means any beneficial ownership of (including stock, partnership interest or other securities) any Person, or any loan, advance or capital contribution to any Person.

"IRC" means the Internal Revenue Code of 1986, as amended, and the regulations thereunder.

"Lien" means any mortgage, lien, deed of trust, charge, pledge, security interest or other encumbrance.

"Loan Documents" means, collectively, this Agreement, any note or notes executed by Borrower, and any other present or future agreement entered into between Borrower and/or for the benefit of Bank in connection with this Agreement, all as amended, extended or restated from time to time.

"Material Adverse Effect" means a material adverse effect on (i) the business operations or condition (financial or otherwise) of Borrower and its Subsidiaries taken as a whole or (ii) the ability of Borrower to repay the Obligations or otherwise perform its obligations under the Loan Documents.

"Maturity Date" means June 5, 2002.

"Negotiable Collateral" means all of Borrower's present and future letters of credit of which it is a beneficiary, notes, drafts, instruments, securities, documents of title, and chattel paper.

"Obligations" means all debt, principal, interest, Bank Expenses and other amounts owed to Bank by Borrower pursuant to this Agreement, whether absolute or contingent, due or to become due, now existing or hereafter arising, including any interest that accrues after the commencement of an Insolvency Proceeding.

"Payment Date" means the FIFTH calendar day of each month commencing on the first such date after the Closing Date and ending on the Maturity Date.

"Permitted Indebtedness" means:

(a) Indebtedness of Borrower in favor of Bank arising under this Agreement or any other Loan Document;

(b) Indebtedness existing on the Closing Date and disclosed in the Schedule;

(c) Subordinated Debt;

(d) Indebtedness to trade creditors incurred in the ordinary course of business; and

(e) Indebtedness secured by Permitted Liens.

"Permitted Investment" means:

(a) Investments existing on the Closing Date disclosed in the Schedule;

(b) (i) marketable direct obligations issued or unconditionally guaranteed by the United States of America or any agency or any State thereof maturing within one (1) year from the date of acquisition thereof, (ii) commercial paper maturing no more than one (1) year from the date of creation thereof and currently having the highest rating obtainable from either Standard & Poor's Corporation or Moody's

Investors Service, Inc., and (iii) certificates of deposit maturing no more than one (1) year from the date of investment therein issued by Bank; and

(c) Investments consisting of (i) travel and expense advances to employees and other employee loans and advances in the ordinary course of business in an aggregate amount not in excess of $50,000 outstanding at any time and (ii) loans to employees, officers or directors of Borrower relating to the purchase of equity securities of Borrower pursuant to employee stock purchase plans approved by Borrower's Board of Directors.

"Permitted Liens" means the following:

(a) Any Liens existing on the Closing Date and disclosed in the Schedule or arising under this Agreement or the other Loan Documents;

(b) Liens for taxes, fees, assessments or other governmental charges or levies, either not delinquent or being contested in good faith by appropriate proceedings and as to which adequate reserves are maintained on Borrower's Books in accordance with GAAP, provided the same have no priority over any of Bank's security interests;

(c) Liens (i) upon or in any Equipment acquired or held by Borrower or any of its Subsidiaries to secure the purchase price of such Equipment or indebtedness incurred solely for the purpose of financing the acquisition of such Equipment, or (ii) existing on such Equipment at the time of its acquisition, provided that the Lien is confined solely to the property so acquired and improvements thereon, and the proceeds of such Equipment;

(d) Liens on Equipment leased by Borrower or any Subsidiary pursuant to an operating or capital lease in the ordinary course of business (including proceeds thereof and accessions thereto) incurred solely for the purpose of financing the lease of such Equipment (including Liens pursuant to leases permitted pursuant to Section 7.1 and Liens arising from UCC financing statements regarding leases permitted by this Agreement); and

(e) Liens incurred in connection with the extension, renewal or refinancing of the indebtedness secured by Liens of the type described in clauses (a) through (d) above, provided that any extension, renewal or replacement Lien shall be limited to the property encumbered by the existing Lien and the principal amount of the indebtedness being extended, renewed or refinanced does not increase.

"Person" means any individual, sole proprietorship, partnership, limited liability company, joint venture, trust, unincorporated organization, association, corporation, institution, public benefit corporation, firm, joint stock company, estate, entity or governmental agency.

"Prime Rate" means the variable rate of interest, per annum, most recently announced by Bank, as its "prime rate," whether or not such announced rate is the lowest rate available from Bank.

"Quick Assets" means, as of any applicable date, the consolidated cash, cash equivalents, accounts receivable and investments with maturities of fewer than 90 days of Borrower determined in accordance with GAAP.

"Responsible Officer" means each of the Chief Executive Officer, the President, the Chief Financial Officer, the Treasurer and the Controller of Borrower.

"Schedule" means the schedule of exceptions attached hereto, if any.

"Subordinated Debt" means any debt incurred by Borrower that is subordinated to the debt owing by Borrower to Bank on terms acceptable to Bank (and identified as being such by Borrower and Bank).

"Subsidiary" means with respect to any Person, a corporation, partnership, company association, joint venture, or any other business entity of which more than fifty percent (50%) of the voting stock or other equity interests is owned or controlled, directly or indirectly, by such Person or one or more Affiliates of such Person.

"Tangible Net Worth" means as of any applicable date, the consolidated total assets of Borrower and its Subsidiaries minus, without duplication, (i) the sum of any amounts attributable to (a) goodwill, (b) intangible items such as unamortized debt discount and expense, patents, trade and service marks and names, copyrights and research and development expenses except prepaid expenses, and (c) all reserves not already deducted from assets and (ii) Total Liabilities.

"Total Liabilities" means as of any applicable date, any date as of which the amount thereof shall be determined, all obligations that should, in accordance with GAAP be classified as liabilities on the consolidated balance sheet of Borrower, including in any event all Indebtedness, but specifically excluding Subordinated Debt and all redemption obligations of Borrower's pursuant to its redeemable preferred stock, whether now or in the future authorized and outstanding.

1.2 Accounting and Other Terms. All accounting terms not specifically defined herein shall be construed in accordance with GAAP and all calculations and determinations made hereunder shall be made in accordance with GAAP. When used herein, the term "financial statements" shall include the notes and schedules thereto, if any, subject to year-end adjustments for unaudited financial statements. The terms "including"/ "includes" shall always be read as meaning "including (or includes) without limitation", when used herein or in any other Loan Document.

2. LOAN AND TERMS OF PAYMENT

2.1 Credit Extensions. Subject to and upon the terms and conditions of this Agreement, Borrower promises to pay to the order of Bank, in lawful money of the United States of America, at such place as Bank may reasonably designate, the aggregate unpaid principal amount of all Credit Extensions made by Bank to Borrower hereunder. Borrower shall also pay interest on the unpaid principal amount of such Credit Extensions at rates in accordance with the terms hereof.

2.1.1 Equipment Advances.

(a) At any time from the date hereof through JUNE 30, 1998, Borrower may from time to time request advances from Bank in an aggregate amount not to exceed ONE MILLION AND NO/100THS DOLLARS ($1,000,000) to finance Equipment purchased after JULY 1,1997 and prior to JULY 1, 1998.

(b) At any time after JUNE 30, 1998 through DECEMBER 31,1998, Borrower may from time to time request advances from Bank in an aggregate amount not to exceed the Committed Equipment Line less any advances made under Section 2.1.1(a) of this Agreement, to finance Equipment purchased after JUNE 1, 1998 and prior to JANUARY 1, 1999.

(c) The advances under Sections 2.1.1(a) and 2.1.1(b) of this Agreement (each an "Equipment Advance" and collectively, the "Equipment Advances") shall not exceed ONE HUNDRED Percent (100%) of the invoice amount of such equipment approved from time to time by Bank, excluding taxes, shipping, warranty charges, freight discounts and installation expense. Software may, however, constitute up to FORTY percent (40%) of aggregate Equipment Advances.

(d) Interest shall accrue from the date of each Equipment Advance at the rate specified in Section 2.2(a), and shall be payable on the Payment Date of each month through the month in which the applicable Equipment Advance converts to a term loan as set forth in this Section 2.1.1(d). Any Equipment Advances made under Section 2.1.1(a) of this Agreement that are outstanding on JULY 1,1998 will be payable in FORTY EIGHT (48) equal monthly installments of principal, plus all accrued interest, beginning on the Payment Date of each month commencing JULY 5,1998 and with the last payment due on JUNE 5, 2002.

Any Equipment Advances made under Section 2.1.1(b) of this Agreement that are outstanding on JANUARY 1, 1999 will be payable in FORTY TWO (42) equal monthly installments of principal, plus all accrued interest, beginning on the Payment Date of each month commencing JANUARY 5,1999 and with the last payment due on JUNE 5, 2002. Equipment Advances may be prepaid without penalty. Equipment Advances, once repaid, may not be reborrowed.

(e) When Borrower desires to obtain an Equipment Advance, Borrower shall notify Bank (which notice shall be irrevocable) by facsimile transmission to be received no later than 3:00 p.m. Pacific time one (1) Business Day before the day on which the Equipment Advance is to be made. Such notice shall be substantially in the form of Exhibit B. The notice shall be signed by a Responsible Officer or its designee and include a copy of the invoice(s) for the Equipment to be financed.

2.2 Interest Rates, Payments, and Calculations.

(a) Interest Rate. Except as set forth in Section 2.2(b), any Credit Extensions shall bear interest, on the average daily balance thereof, at a per annum rate equal to ONE-HALF (0.50) percentage points above the Prime Rate.

(b) Default Rate. All Obligations shall bear interest, from and after the occurrence of an Event of Default, at a rate equal to three (3) percentage points above the interest rate applicable immediately prior to the occurrence of the Event of Default.

(c) Payments. Interest hereunder shall be due and payable on each Payment Date. Borrower hereby authorizes Bank to debit any accounts with Bank, including, without limitation, Account Number 3300070686 for payments of principal and interest due on the Obligations and any other amounts owing by Borrower to Bank. Bank will notify Borrower of all debits which Bank has made against Borrower's accounts. Any such debits against Borrower's accounts in no way shall be deemed a set-off. Any interest not paid when due shall be compounded by becoming a part of the Obligations, and such interest shall thereafter accrue interest at the rate then applicable hereunder.

(d) Computation. In the event the Prime Rate is changed from time to time hereafter, the applicable rate of interest hereunder shall be increased or decreased effective as of 12:01 a.m. on the day the Prime Rate is changed, by an amount equal to such change in the Prime Rate. All interest chargeable under the Loan Documents shall be computed on the basis of a three hundred sixty (360) day year for the actual number of days elapsed.

2.3 Crediting Payments. Prior to the occurrence of an Event of Default, Bank shall credit a wire transfer of funds, check or other item of payment to such deposit account or Obligation as Borrower specifies. After the occurrence of an Event of Default, the receipt by Bank of any wire transfer of funds, check, or other item of payment, whether directed to Borrower's deposit account with Bank or to the Obligations or otherwise, shall be immediately applied to conditionally reduce Obligations, but shall not be considered a payment in respect of the Obligations unless such payment is of immediately available federal funds or unless and until such check or other item of payment is honored when presented for payment. Notwithstanding anything to the contrary contained herein, any wire transfer or payment received by Bank after 12:00 noon Pacific time shall be deemed to have been received by Bank as of the opening of business on the immediately following Business Day. Whenever any payment to Bank under the Loan Documents would otherwise be due (except by reason of acceleration) on a date that is not a Business Day, such payment shall instead be due on the next Business Day, and additional fees or interest, as the case may be, shall accrue and be payable for the period of such extension.

2.4 Fees. Borrower shall pay to Bank the following:

(a) Financial Examination and Appraisal Fees. Bank's customary fees and out-of-pocket expenses (not to exceed $1,500 per audit or appraisal, unless an Event of Default has occurred and is continuing) for Bank's audits of Borrower's Accounts, and for each appraisal of Collateral and financial analysis and examination of Borrower performed from time to time by Bank or its agents, provided that such audits and

appraisals will be conducted no more often than every twelve (12) months unless an Event of Default has occurred and is continuing;

(b) Bank Expenses. Upon demand from Bank, including, without limitation, upon the date hereof, all Bank Expenses incurred through the date hereof, including reasonable attorneys' fees and expenses, and, after the date hereof, all Bank Expenses, including reasonable attorneys' fees and expenses, as and when they become due.

2.5 Additional Costs. In case any law, regulation, treaty or official directive or the interpretation or application thereof by any court or any governmental authority charged with the administration thereof or the compliance with any guideline or request of any central bank or other governmental authority (whether or not having the force of law):

(a) subjects Bank to any tax with respect to payments of principal or interest or any other amounts payable hereunder by Borrower or otherwise with respect to the transactions contemplated hereby (except for taxes on the overall net income of Bank imposed by the United States of America or any political subdivision thereof);

(b) imposes, modifies or deems applicable any deposit insurance, reserve, special deposit or similar requirement against assets held by, or deposits in or for the account of, or loans by, Bank; or

(c) imposes upon Bank any other condition with respect to its performance under this Agreement,

and the result of any of the foregoing is to increase the cost to Bank, reduce the income receivable by Bank or impose any expense upon Bank with respect to any loans, Bank shall notify Borrower thereof. Borrower agrees to pay to Bank the amount of such increase in cost, reduction in income or additional expense as and when such cost, reduction or expense is incurred or determined, upon presentation by Bank of a statement of the amount and setting forth Bank's calculation thereof, all in reasonable detail, which statement shall be deemed true and correct absent manifest error.

2.6 Term. Except as otherwise set forth herein, this Agreement shall become effective on the Closing Date and, subject to Section 12.7, shall continue in full force and effect for a term ending on the Maturity Date. Notwithstanding the foregoing, Bank shall have the right to terminate its obligation to make Credit Extensions under this Agreement immediately and without notice upon the occurrence and during the continuance of an Event of Default. Notwithstanding termination of this Agreement, Bank's lien on the Collateral shall remain in effect for so long as any Obligations are outstanding.

2.7 Application of Payment. Borrower irrevocably waives the right to direct the application of any and all payments at any time hereafter received by Bank from or on behalf of Borrower, and Borrower irrevocably agrees that Bank shall have the continuing exclusive right to apply any and all such payments against the then due and owing obligations of Borrower as Bank may deem advisable. In the absence of a specific determination by Bank with respect thereto, all payments shall be applied in the following order: (a) then due and payable fees and expenses; (b) then due and payable interest payments and mandatory prepayments; and (c) then due and payable principal payments and optional prepayments.

3. CONDITIONS OF LOANS

3.1 Conditions Precedent to Initial Credit Extension. The obligation of Bank to make the initial Credit Extension is subject to the condition precedent that Bank shall have received, in form and substance satisfactory to Bank, the following:

(a) this Agreement duly executed by Borrower;

(b) a certificate of the Secretary of Borrower with respect to charter, bylaws, incumbency and resolutions authorizing the execution and delivery of this Agreement;

(c) financing statements (Forms UCC-1);

(d) insurance certificate;

(e) payment of the fees and Bank Expenses then due specified in Section 2.4 hereof;

(f) Certificate of Foreign Qualification (if applicable); and

(g) financial statements and a Certificate of Compliance as required by Section 6.3 hereof.

3.2 Conditions Precedent to all Credit Extensions. The obligation of Bank to make each Credit Extension, including the initial Credit Extension, is further subject to the following conditions:

(a) timely receipt by Bank of the Payment/Advance Form as provided in Section 2.1; and

(b) the representations and warranties contained in Section 5 shall be true and correct in all material respects on and as of the date of such Payment/Advance Form and on the effective date of each Credit Extension as though made at and as of each such date, except to the extent any such representation or warranty specifically relates to a prior date, and no Event of Default shall have occurred and be continuing, or would result from such Credit Extension. The making of each Credit Extension shall be deemed to be a representation and warranty by Borrower on the date of such Credit Extension as to the accuracy of the facts referred to in this Section 3.2(b).

4. CREATION OF SECURITY INTEREST

4.1 Grant of Security Interest. Borrower grants and pledges to Bank a continuing security interest in all presently existing and hereafter acquired or arising Collateral in order to secure prompt payment of any and all Obligations and in order to secure prompt performance by Borrower of each of its covenants and duties under the Loan Documents. Except as set forth in the Schedule or with respect to Permitted Liens, such security interest constitutes a valid, first priority security interest in the presently existing Collateral, and will constitute a valid, first priority security interest in Collateral acquired after the date hereof. Borrower acknowledges that Bank may place a "hold" on any Deposit Account pledged as Collateral to secure the Obligations. Notwithstanding termination of this Agreement, Bank's Lien on the Collateral shall remain in effect for so long as any Obligations are outstanding.

4.2 Delivery of Additional Documentation Required. Borrower shall from time to time execute and deliver to Bank, at the request of Bank, all Negotiable Collateral, all financing statements and other documents that Bank may reasonably request, in form satisfactory to Bank, to perfect and continue perfected Bank's security interests in the Collateral and in order to fully consummate all of the transactions contemplated under the Loan Documents.

4.3 Right to Inspect. Bank (through any of its officers, employees, or agents) shall have the right, upon reasonable prior notice, from time to time during Borrower's usual business hours, to inspect Borrower's Books and to make copies thereof and to check, test, and appraise the Collateral in order to verify Borrower's financial condition or the amount, condition of, or any other matter relating to, the Collateral.

5. REPRESENTATlONS AND WARRANTIES

Borrower represents and warrants as follows:

5.1 Due Organization and Qualification. Borrower and each Subsidiary is a corporation duly existing and in good standing under the laws of its state of incorporation and qualified and licensed to do

business in, and is in good standing in, any state in which the conduct of its business or its ownership of property requires that it be so qualified.

5.2 Due Authorization: No Conflict. The execution, delivery, and performance of the Loan Documents are within Borrower's powers, have been duly authorized, and are not in conflict with nor constitute a breach of any provision contained in Borrower's Certificate of Incorporation or Bylaws, nor will they constitute an event of default under any material agreement to which Borrower is a party or by which Borrower is bound. Borrower is not in default under any agreement to which it is a party or by which it is bound, which default could have a Material Adverse Effect.

5.3 No Prior Encumbrances. Borrower has good and indefeasible title to the Collateral, free and clear of Liens, except for Permitted Liens.

5.4 Merchantable Inventory. All Inventory is in all material respects of good and marketable quality, free from all material defects, subject to recorded reserves for obsolete inventory.

5.5 Name: Location of Chief Executive Office. Except as disclosed in the Schedule, Borrower has not done business and will not without at least thirty (30) days prior written notice to Bank do business under any name other than that specified on the signature page hereof The chief executive office of Borrower is located at the address indicated in Section 10 hereof.

5.6 Litigation. Except as set forth in the Schedule, there are no actions or proceedings pending, or, to Borrower's knowledge, threatened by or against Borrower or any Subsidiary before any court or administrative agency in which an adverse decision could have a Material Adverse Effect or a material adverse effect on Borrower's interest or Bank's security interest in the Collateral.

5.7 No Material Adverse Change in Financial Statements. All consolidated financial statements related to Borrower and any Subsidiary that have been delivered by Borrower to Bank fairly present in all material respects Borrower's consolidated financial condition as of the date thereof and Borrower's consolidated results of operations for the period then ended. There has not been a material adverse change in the consolidated financial condition of Borrower since the date of the most recent of such financial statements submitted to Bank on or about the Closing Date.

5.8 Solvency. The fair saleable value of Borrower's assets (including goodwill minus disposition costs) exceeds the fair value of its liabilities; the Borrower is not left with unreasonably small capital after the transactions contemplated by this Agreement; and Borrower is able to pay its debts (including trade debts) as they mature.

5.9 Regulatory Compliance. Borrower and each Subsidiary has met the minimum funding requirements of ERISA with respect to any employee benefit plans subject to ERISA. No event has occurred resulting from Borrower's failure to comply with ERISA that is reasonably likely to result in Borrowers incurring any liability that could have a Material Adverse Effect. Borrower is not an "investment company" or a company "controlled" by an "investment company" within the meaning of the Investment Company Act of 1940. Borrower is not engaged principally, or as one of its important activities, in the business of extending credit for the purpose of purchasing or carrying margin stock (within the meaning of Regulations G, T and U of the Board of Governors of the Federal Reserve System). Borrower has complied in all material respects with all the provisions of the Federal Fair Labor Standards Act. Borrower has not violated any statutes, laws, ordinances or rules applicable to it, violation of which could have a Material Adverse Effect.

5.10 Environmental Condition. None of Borrower's or any Subsidiary's properties or assets has ever been used by Borrower or any Subsidiary or, to the best of Borrowers knowledge, without independent investigation, by previous owners or operators, in the disposal of, or to produce, store, handle, treat, release, or transport, any hazardous waste or hazardous substance other than in accordance with applicable law; to the best of Borrower's knowledge, without independent investigation, none of Borrower's properties or assets has ever been designated or identified in any manner pursuant to any environmental protection statute as a hazardous waste or hazardous substance disposal site, or a candidate for closure pursuant to any environmental

protection statute; no lien arising under any environmental protection statute has attached to any revenues or to any real or personal property owned by Borrower or any Subsidiary; and neither Borrower nor any Subsidiary has received a summons, citation, notice, or directive from the Environmental Protection Agency or any other federal, state or other governmental agency concerning any action or omission by Borrower or any Subsidiary resulting in the release, or other disposition of hazardous waste or hazardous substances into the environment.

5.11 Taxes. Borrower and each Subsidiary has filed or caused to be filed all tax returns required to be filed on a timely basis, or has duly and timely filed for extensions with respect to same, and has paid, or has made adequate provision for the payment of all taxes reflected therein.

5.12 Subsidiaries. Borrower does not own any stock, partnership interest or other equity securities of any Person, except for Permitted Investments.

5.13 Government Consents. Borrower and each Subsidiary has obtained all consents, approvals and authorizations of, made all declarations or filings with, and given all notices to, all governmental authorities that are necessary for the continued operation of Borrower's business as currently conducted, except where the failure to do so would not have a Material Adverse Effect.

5.14 Full Disclosure. No representation, warranty or other statement made by Borrower in any certificate or written statement furnished to Bank contains any untrue statement of a material fact or omits to state a material fact necessary in order to make the statements contained in such certificates or statements not misleading.

6. AFFIRMATIVE COVENANTS

Borrower covenants and agrees that, until payment in full of all outstanding Obligations, and for so long as Bank may have any commitment to make a Credit Extension hereunder, Borrower shall do all of the following:

6.1 Good Standing. Borrower shall maintain its and each of its Subsidiaries' corporate existence and good standing in its jurisdiction of incorporation and maintain qualification in each jurisdiction in which the failure to so qualify could have a Material Adverse Effect. Borrower shall maintain, and shall cause each of its Subsidiaries to maintain, to the extent consistent with prudent management of Borrower's business, in force all licenses, approvals and agreements, the loss of which could have a Material Adverse Effect.

6.2 Government Compliance. Borrower shall meet, and shall cause each Subsidiary to meet, the minimum funding requirements of ERISA with respect to any employee benefit plans subject to ERISA. Borrower shall comply, and shall cause each Subsidiary to comply, with all statutes, laws, ordinances and government rules and regulations to which it is subject, noncompliance with which could have a Material Adverse Effect or a material adverse effect on the Collateral or the priority of Bank's Lien on the Collateral.

6.3 Financial Statements, Reports, Certificates. (i) Borrower shall deliver to Bank:

(a) as soon as available, but in any event within thirty (30) days after the end of each month, a company prepared unaudited consolidated balance sheet and unaudited income statement covering Borrowers consolidated operations during such period, in a form and certified by an officer of Borrower reasonably acceptable to Bank;

(b) as soon as available, but in any event within one hundred twenty (120) days after the end of Borrowers fiscal year 1997, company prepared unaudited consolidated balance sheet and unaudited income statement covering Borrowers consolidated operations during such year, in a form and certified by an officer of Borrower reasonably acceptable to Bank; provided, however, that if Borrower's fiscal year 1997 financial statements are audited, such financial statements need not be accompanied by an unqualified opinion of the auditing certified public accounting firm.

(c) as soon as available, but in any event within one hundred twenty (120) days after the end of each of Borrower's fiscal year other than FYE 12/31/97, audited consolidated financial statements of Borrower prepared in accordance with GAAP, consistently applied, together with an unqualified opinion on such financial statements of Ernst & Young or another independent certified public accounting firm reasonably acceptable to Bank;

(d) within five (5) days of filing, copies of all statements, reports and notices sent or made available generally by Borrower to its security holders or to any holders of Subordinated Debt and all reports on Form 10-K, 10-Q and 8-K filed with the Securities and Exchange Commission;

(e) promptly upon receipt of notice thereof, a report of any legal actions pending or threatened against Borrower or any Subsidiary that could result in damages or costs to Borrower or any Subsidiary of One Hundred Thousand Dollars ($100,000) or more;

(f) such budgets, sales projections, operating plans or other financial information as Bank may reasonably request from time to time.

(g) within thirty (30) days after the last day of each month, with the monthly financial statements, a Compliance Certificate signed by a Responsible Officer in substantially the form of Exhibit C hereto.

6.4 Inventory; Returns. Borrower shall keep all Inventory in good and marketable condition, free from all material defects, subject to recorded reserves for obsolete inventory. Returns and allowances, if any, as between Borrower and its account debtors shall be on the same basis and in accordance with the usual customary practices of Borrower, as they exist at the time of the execution and delivery of this Agreement. Borrower shall promptly notify Bank of all returns and recoveries and of all disputes and claims, where the return, recovery, dispute or claim involves more than Fifty Thousand Dollars ($50,000).

6.5 Taxes. Borrower shall make, and shall cause each Subsidiary to make, due and timely payment or deposit of all material federal, state, and local taxes, assessments, or contributions required of it by law, and will execute and deliver to Bank, on demand, appropriate certificates attesting to the payment or deposit thereof; and Borrower will make, and will cause each Subsidiary to make, timely payment or deposit of all material tax payments and withholding taxes required of it by applicable laws, including, but not limited to, those laws concerning F.I.C.A., F.U.T.A., state disability, and local, state, and federal income taxes, and will, upon reasonable request, furnish Bank with proof satisfactory to Bank indicating that Borrower or a Subsidiary has made such payments or deposits; provided that Borrower or a Subsidiary need not make any payment if the amount or validity of such payment is (i) contested in good faith by appropriate proceedings, (ii) is reserved against (to the extent required by GAAP) by Borrower and (iii) no lien other than a Permitted Lien results.

6.6 Insurance.

(a) Borrower, at its expense, shall keep the Collateral insured against loss or damage by fire, theft, explosion, sprinklers, and all other hazards and risks, and in such amounts, as ordinarily insured against by other owners in similar businesses conducted in the locations where Borrower's business is conducted on the date hereof. Borrower shall also maintain insurance relating to Borrower's ownership and use of the Collateral in amounts and of a type that are customary to businesses similar to Borrower's.

(b) All such policies of insurance shall be in such form, with such companies, and in such amounts as are reasonably satisfactory to Bank. All such policies of property insurance shall contain a lender's loss payable endorsement, in a form satisfactory to Bank, showing Bank as an additional loss payee thereof and all liability insurance policies shall show the Bank as an additional insured, and shall specify that the insurer must give at least twenty (20) days notice to Bank before canceling its policy for any reason. At Bank's request, Borrower shall deliver to Bank certified copies of such policies of insurance and evidence of the payments of all premiums therefor. All proceeds payable under any such policy shall, at the option of Bank, be payable to Bank to be applied on account of the Obligations.

6.7 Principal Operating Accounts. Borrower shall maintain its principal operating accounts with Bank.

6.8 Tangible Net Worth. Borrower shall maintain, as of the last day of each calendar month, a Tangible Net Worth of not less than the total of all outstanding Obligations under this Agreement.

6.9 Further Assurances. At any time and from time to time Borrower shall execute and deliver such further instruments and take such further action as may reasonably be requested by Bank to effect the purposes of this Agreement.

7. NEGATIVE COVENANTS

Borrower covenants and agrees that, so long as any Credit Extension hereunder shall be available and until payment in full of the outstanding Obligations or for so long as Bank may have any commitment to make any Credit Extensions, Borrower will not do any of the following:

7.1 Dispositions. Convey, sell, lease, transfer or otherwise dispose of (collectively, a "Transfer"), or permit any of its Subsidiaries to Transfer, all or any part of its business or property, other than Transfers: (i) of inventory in the ordinary course of business, (ii) of non-exclusive licenses and similar arrangements for the use of the property of Borrower or its Subsidiaries in the ordinary course of business, (iii) that constitute payment of normal and usual operating expenses in the ordinary course of business, or (iv) of worn-out or obsolete Equipment.

7.2 Changes in Business, Ownership, or Management, Business Locations. Engage in any business, or permit any of its Subsidiaries to engage in any business, other than the businesses currently engaged in by Borrower and any business substantially similar or related thereto (or incidental thereto), or if any two of Rubin Gruber, Michael G. Hluchyj or Kwok Wong cease to be executive officers of Borrower and replacements reasonably satisfactory to Bank are not made within ninety (90) days. Borrower will not, without at least thirty (30) days prior written notification to Bank, relocate its chief executive office or add any new offices or business locations.

7.3 Mergers or Acquisitions. Merge or consolidate, or permit any of its Subsidiaries to merge or consolidate, with or into any other business organization, or acquire, or permit any of its Subsidiaries to acquire, all or substantially all of the capital stock or property of another Person if an event of default has occurred and is continuing or would result from such action.

7.4 Indebtedness. Create, incur, assume or be or remain liable with respect to any Indebtedness, or permit any Subsidiary so to do, other than Permitted Indebtedness.

7.5 Encumbrances. Create, incur, assume or suffer to exist any Lien with respect to any of its property, or assign or otherwise convey any right to receive income, including the sale of any Accounts, or permit any of its Subsidiaries so to do, except for Permitted Liens.

7.6 Distributions. Pay any dividends or make any other distribution or payment on account of or in redemption, retirement or purchase of any capital stock other than (i) cash dividends on preferred stock issued after the date of this Agreement, as required by Borrower's charter, at an annual rate not in excess of five percent (5%) of original issue price of such stock, and (ii) payments in an aggregate amount not to exceed $50,000 in any fiscal year of Borrower made for the repurchase of stock effected in connection with the termination of employees of Borrower.

7.7 Investments. Directly or indirectly acquire or own, or make any Investment in or to any Person, or permit any of its Subsidiaries so to do, other than Permitted Investments,

7.8 Transactions with Affiliates. Directly or indirectly enter into or permit to exist any material transaction with any Affiliate of Borrower except for transactions that are in the ordinary course of

Borrower's business, upon fair and reasonable terms that are no less favorable to Borrower than would be obtained in an arm's length transaction with a non-affiliated Person.

7.9 Subordinated Debt. Make any payment in respect of any Subordinated Debt, or permit any of its Subsidiaries to make any such payment, except in compliance with the terms of such Subordinated Debt, or amend any provision contained in any documentation relating to the Subordinated Debt without Bank's prior written consent.

7.10 Collateral. Store the Collateral with a bailee, warehouseman, or similar party unless Bank has received a pledge of any warehouse receipt covering such Collateral. Except for Collateral sold in the ordinary course of business and except for such other locations as Bank may approve in writing, Borrower shall keep the Collateral only at the location set forth in Section 10 hereof and such other locations of which Borrower gives Bank prior written notice and as to which Borrower signs and files a financing statement where needed to perfect Bank's security interest.

7.11 Compliance. Become an "investment company" or a company controlled by an "investment company," within the meaning of the Investment Company Act of 1940, or become principally engaged in, or undertake as one of its important activities, the business of extending credit for the purpose of purchasing or carrying margin stock, or use the proceeds of any Credit Extension for such purpose; fail to meet the minimum funding requirements of ERISA; permit a Reportable Event or Prohibited Transaction, as defined in ERISA, to occur; fail to comply with the Federal Fair Labor Standards Act or violate any other law or regulation, which violation could have a Material Adverse Effect or a material adverse effect on the Collateral or the priority of Banks Lien on the Collateral; or permit any of its Subsidiaries to do any of the foregoing.

7.12 Negative Pledge of Intellectual Property. Without Bank's prior written consent which consent shall not be unreasonably withheld, sell, transfer, assign, mortgage, pledge, lease, grant a security interest in, or encumber any of Borrower's intellectual property, including, without limitation, the following:

(a) Any and all copyright rights, copyright applications, copyright registrations and the like protections in each work of authorship and derivative work thereof, whether published or unpublished and whether or not the same also constitutes a trade secret, now or hereafter existing, created, acquired or held;

(b) Any and all blueprints, drawings, trade secrets, and any and all intellectual property rights in computer software and computer software products now or hereafter existing, created, acquired or held;

(c) Any and all design rights which may be available to Borrower now or hereafter existing, created, acquired or held;

(d) All patents, patent applications and like protections including, without limitation, improvements, divisions, continuations, renewals, reissues, extensions and continuations-in-part of the same, including without limitation the patents and patent applications;

(e) Any trademark and service mark rights, whether registered or not, applications to register and registrations of the same and like protections, and the entire good will of the business of Borrower connected with and symbolized by such trademarks;

(f) Any and all claims for damages by way of past, present and future infringements of any of the rights included above, with the right, but not the obligation, to sue for and collect such damages for said use or infringement of the intellectual property rights identified above;

(g) All licenses or other right to use any of the Copyrights, Patents or Trademarks, and all license fees and royalties arising from such use to the extent permitted by such license or rights;

(h) All amendments, extensions, renewals and extensions of any of the Copyrights, Trademarks or Patents; and

(i) All proceeds and products of the foregoing, including without limitation all payments under insurance or any indemnity or warranty payable in respect of any of the foregoing.

8. EVENTS OF DEFAULT

Any one or more of the following events shall constitute an Event of Default by Borrower under this Agreement:

8.1 Payment Default. If Borrower fails to pay, when due, any of the Obligations.

8.2 Covenant Default.

(a) If Borrower fails to perform any obligation under Sections 6.3, 6.6, 6.7 or 6.8 or violates any of the covenants contained in Article 7 of this Agreement, or

(b) If Borrower fails or neglects to perform, keep, or observe any other material term, provision, condition, covenant, or agreement contained in this Agreement, in any of the Loan Documents, or in any other present or future agreement between Borrower and Bank and as to any default under such other term, provision, condition, covenant or agreement that can be cured, has failed to cure such default within ten (10) days after the occurrence thereof; provided, however, that if the default cannot by its nature be cured within the ten (10) day period or cannot after diligent attempts by Borrower be cured within such ten (10) day period, and such default is likely to be cured within a reasonable time, then Borrower shall have an additional reasonable period (which shall not in any case exceed thirty (30) days) to attempt to cure such default, and within such reasonable time period the failure to have cured such default shall not be deemed an Event of Default (provided that no Credit Extensions will be required to be made during such cure period):

8.3 Material Adverse Change. If there occurs (i) a material impairment of the perfection or priority of Bank's security interests in the Collateral or of the value of such Collateral which is not covered by adequate insurance, or (ii) a material adverse change in the business, operations or condition (financial or otherwise) of the Borrower;

8.4 Attachment. If any material portion of Borrower's assets is attached, seized, subjected to a writ or distress warrant, or is levied upon, or comes into the possession of any trustee, receiver or person acting in a similar capacity and such attachment, seizure, writ or distress warrant or levy has not been removed, discharged or rescinded within ten (10) days, or if Borrower is enjoined, restrained, or in any way prevented by court order from continuing to conduct all or any material part of its business affairs, or if a judgment or other claim becomes a lien or encumbrance upon any material portion of Borrower's assets, or if a notice of lien, levy, or assessment is filed of record with respect to any of Borrower's assets by the United States Government, or any department, agency, or instrumentality thereof, or by any state, county, municipal, or governmental agency, and the same is not paid within ten (10) days after Borrower receives notice thereof, provided that none of the foregoing shall constitute an Event of Default where such action or event is stayed or an adequate bond has been posted pending a good faith contest by Borrower (provided that no Credit Extensions will be required to be made during such cure period);

8.5 Insolvency. If Borrower becomes insolvent, or if an Insolvency Proceeding is commenced by Borrower, or if an Insolvency Proceeding is commenced against Borrower and is not dismissed or stayed within 30 days (provided that no Credit Extensions will be made prior to the dismissal of such Insolvency Proceeding);

8.6 Other Agreements. If there is a default in any agreement to which Borrower is a party with a third party or parties resulting in a right by such third party or parties, whether or not exercised, to accelerate the maturity of any Indebtedness in an amount in excess of One Hundred Thousand Dollars ($100,000) or that could have a Material Adverse Effect;

8.7 Subordinated Debt. If Borrower makes any payment on account of Subordinated Debt, except to the extent such payment is allowed under any subordination agreement entered into with Bank;

8.8 Judgments. If a judgment or judgments for the payment of money in an amount, individually or in the aggregate, of at least Fifty Thousand Dollars ($50,000) shall be rendered against Borrower and shall remain unsatisfied and unstayed for a period of ten (10) days (provided that no Credit Extensions will be made prior to the satisfaction or stay of such judgment); or

8.9 Misrepresentations. If any misrepresentation or misstatement with respect to a circumstance which could have a Material Adverse Effect exists now or hereafter in any warranty or representation set forth herein or in any certificate or writing delivered to Bank by Borrower or any Person acting on Borrower's behalf pursuant to this Agreement or to induce Bank to enter into this Agreement or any other Loan Document.

9. BANK'S RIGHTS AND REMEDIES

9.1 Rights and Remedies. Upon the occurrence and during the continuance of an Event of Default, Bank may, at its election, without notice of its election and without demand, do any one or more of the following, all of which are authorized by Borrower:

(a) Declare all Obligations, whether evidenced by this Agreement, by any of the other Loan Documents, or otherwise, immediately due and payable (provided that upon the occurrence of an Event of Default described in Section 8.5 all Obligations shall become immediately due and payable without any action by Bank);

(b) Cease advancing money or extending credit to or for the benefit of Borrower under this Agreement or under any other agreement between Borrower and Bank;

(c) Settle or adjust disputes and claims directly with account debtors for amounts, upon terms and in whatever order that Bank reasonably considers advisable;

(d) Without notice to or demand upon Borrower, make such payments and do such acts as Bank considers necessary or reasonable to protect its security interest in the Collateral. Borrower agrees to assemble the Collateral if Bank so requires, and to make the Collateral available to Bank as Bank may designate. Borrower authorizes Bank to enter the premises where the Collateral is located, to take and maintain possession of the Collateral, or any part of it, and to pay, purchase, contest, or compromise any encumbrance, charge, or lien which in Bank's determination appears to be prior or superior to its security interest and to pay all expenses incurred in connection therewith. With respect to any of Borrower's premises, Borrower hereby grants Bank a license to enter such premises and to occupy the same, without charge in order to exercise any of Bank's rights or remedies provided herein, at law, in equity, or otherwise;

(e) Without notice to Borrower set off and apply to the Obligations any and all (i) balances and deposits of Borrower held by Bank, or (ii) indebtedness at any time owing to or for the credit or the account of Borrower held by Bank;

(f) Ship, reclaim, recover, store, finish, maintain, repair, prepare for sale, advertise for sale, and sell (in the manner provided for herein) the Collateral. Bank is hereby granted a non-exclusive, royalty-free license or other right, solely pursuant to the provisions of this Section 9.1, to use, without charge, Borrower's labels, patents, copyrights, mask works, rights of use of any name, trade secrets, trade names, trademarks, service marks, and advertising matter, or any property of a similar nature, as it pertains to the Collateral, in completing production of, advertising for sale, and selling any Collateral and, in connection with Bank's exercise of its rights under this Section 9.1, Borrower's rights under all licenses and all franchise agreements shall inure to Bank's benefit;

(g) Sell the Collateral at either a public or private sale, or both, by way of one or more contracts or transactions, for cash or on terms, in such manner and at such places (including Borrower's premises) as Bank determines is commercially reasonable, and apply the proceeds thereof to the Obligations in whatever manner or order it deems appropriate;

(h) Bank may credit bid and purchase at any public sale, or at any private sale as permitted by law; and

(i) Any deficiency that exists after disposition of the Collateral as provided above will be paid immediately by Borrower.

9.2 Power of Attorney. Effective only upon the occurrence and during the continuance of an Event of Default, Borrower hereby irrevocably appoints Bank (and any of Bank's designated officers, or employees) as Borrower's true and lawful attorney to: (a) send requests for verification of Accounts or notify account debtors of Bank's security interest in the Accounts; (b) endorse Borrower's name on any checks or other forms of payment or security that may come into Bank's possession; (c) sign Borrower's name on any invoice or bill of lading relating to any Account, drafts against account debtors, schedules and assignments of Accounts, verifications of Accounts, and notices to account debtors; (d) make, settle, and adjust all claims under and decisions with respect to Borrower's policies of insurance; and (e) settle and adjust disputes and claims respecting the accounts directly with account debtors, for amounts and upon terms which Bank determines to be reasonable; and (f) to file, in its sole discretion, one or more financing or continuation statements and amendments thereto, relative to any of the Collateral without the signature of Borrower where permitted by law; provided Bank may exercise such power of attorney to sign the name of Borrower on any of the documents described in Section 4.2 regardless of whether an Event of Default has occurred. The appointment of Bank as Borrower's attorney in fact, and each and every one of Bank's rights and powers, being coupled with an interest, is irrevocable until all of the Obligations have been fully repaid and performed and Bank's obligation to provide Credit Extensions hereunder is terminated.

9.3 Accounts Collection. Upon the occurrence and during the continuance of an Event of Default, Bank may notify any Person owing funds to Borrower of Bank's security interest in such funds and verify the amount of such Account. Borrower shall collect all amounts owing to Borrower for Bank, receive in trust all payments as Bank's trustee, and if requested or required by Bank, immediately deliver such payments to Bank in their original form as received from the account debtor, with proper endorsements for deposit.

9.4 Bank Expenses. If Borrower fails to pay any amounts or furnish any required proof of payment due to third persons or entities, as required under the terms of this Agreement, then Bank may do any or all of the following: (a) make payment of the same or any part thereof; or (b) obtain and maintain insurance policies of the type discussed in Section 6.6 of this Agreement, and take any action with respect to such policies as Bank deems prudent. Any amounts so paid or deposited by Bank shall constitute Bank Expenses, shall be immediately due and payable, and shall bear interest at the then applicable rate hereinabove provided, and shall be secured by the Collateral. Any payments made by Bank shall not constitute an agreement by Bank to make similar payments in the future or a waiver by Bank of any Event of Default under this Agreement.

9.5 Bank's Liability for Collateral. So long as Bank complies with reasonable banking practices, Bank shall not in any way or manner be liable or responsible for: (a) the safekeeping of the Collateral; (b) any loss or damage thereto occurring or arising in any manner or fashion from any cause; (c) any diminution in the value thereof; or (d) any act or default of any carrier, warehouseman, bailee, forwarding agency, or other person whomsoever. All risk of loss, damage or destruction of the Collateral shall be borne by Borrower.

9.6 Remedies Cumulative. Bank's rights and remedies under this Agreement, the Loan Documents, and all other agreements shall be cumulative. Bank shall have all other rights and remedies not expressly set forth herein as provided under the Code, by law, or in equity. No exercise by Bank of one right or remedy shall be deemed an election, and no waiver by Bank of any Event of Default on Borrowers part shall be deemed a continuing waiver. No delay by Bank shall constitute a waiver, election, or acquiescence by it. No waiver by Bank shall be effective unless made in a written document signed on behalf of Bank and then shall be effective only in the specific instance and for the specific purpose for which it was given.

9.7 Demand; Protest. Borrower waives demand, protest, notice of protest, notice of default or dishonor, notice of payment and nonpayment, notice of any default, nonpayment at maturity, release, compromise, settlement, extension, or renewal of accounts, documents, instruments, chattel paper, and guarantees at any time held by Bank on which Borrower may in any way be liable.

10. NOTICES

Unless otherwise provided in this Agreement, all notices or demands by any party relating to this Agreement or any other agreement entered into in connection herewith shall be in writing and (except for financial statements and other informational documents which may be sent by first-class mail, postage prepaid) shall be personally delivered or sent by a recognized overnight delivery service, by certified mail, postage prepaid, return receipt requested, or by telefacsimile to Borrower or to Bank, as the case may be, at its addresses set forth below:

If to Borrower	Sonus Networks, Inc. 5 Carlisle Road Westford, MA 01886 Attn: Rubin Gruber, President FAX: 978-392-9118
If to Bank	Silicon Valley Bank 40 William Street Wellesley, MA 02181 Attn: Joan S. Parsons FAX: 617-431-9906

Any such notice shall be deemed to have been given on the date of personal delivery or telefacsimile, one (1) day after the date of sending by overnight delivery as aforesaid or two (2) days after the date of mailing as aforesaid. The parties hereto may change the address at which they are to receive notices hereunder, by notice in writing in the foregoing manner given to the other.

11. CHOICE OF LAW AND VENUE

The laws of the Commonwealth of Massachusetts shall apply to this Agreement. BORROWER ACCEPTS FOR ITSELF AND IN CONNECTION WITH ITS PROPERTIES, UNCONDITlONALLY, THE NON-EXCLUSIVE JURISDICTION OF ANY STATE OR FEDERAL COURT OF COMPETENT JURISDICTION IN THE COMMONWEALTH OF MASSACHUSETTS IN ANY ACTION, SUIT, OR PROCEEDING OF ANY KIND AGAINST IT WHICH ARISES OUT OF OR BY REASON OF THIS AGREEMENT PROVIDED, HOWEVER, THAT IF FOR ANY REASON BANK CANNOT AVAIL ITSELF OF THE COURTS OF THE COMMONWEALTH OF MASSACHUSETTS, BORROWER ACCEPTS JURISDICTION OF THE COURTS AND VENUE IN SANTA CLARA COUNTY, CALIFORNIA. BORROWER AND BANK EACH HEREBY WAIVE THEIR RESPECTIVE RIGHTS TO A JURY TRIAL OF ANY CLAIM OR CAUSE OF ACTION BASED UPON OR ARISING OUT OF ANY OF THE LOAN DOCUMENTS OR ANY OF THE TRANSACTIONS CONTEMPLATED THEREIN, INCLUDING CONTRACT CLAIMS, TORT CLAIMS, BREACH OF DUTY CLAIMS, AND ALL OTHER COMMON LAW OR STATUTORY CLAIMS. EACH PARTY RECOGNIZES AND AGREES THAT THE FOREGOING WAIVER CONSTITUTES A MATERIAL INDUCEMENT FOR IT TO ENTER INTO THIS AGREEMENT. EACH PARTY REPRESENTS AND WARRANTS THAT IT HAS REVIEWED THIS WAIVER WITH ITS LEGAL COUNSEL AND THAT IT KNOWINGLY AND VOLUNTARILY WAIVES ITS JURY TRIAL RIGHTS FOLLOWING CONSULTATION WITH LEGAL COUNSEL.

12. GENERAL PROVISIONS

12.1 Successors and Assigns. This Agreement shall bind and inure to the benefit of the respective successors and permitted assigns of each of the parties; provided, however, that neither this Agreement nor any rights hereunder may be assigned by Borrower without Bank's prior written consent, which consent may be granted or withheld in Bank's sole discretion. Bank shall have the right without the consent of or notice to Borrower to sell, transfer, negotiate, or grant participation in all or any part of, or any interest in, Bank's obligations, rights and benefits hereunder.

12.2 Indemnification. Borrower shall indemnify, defend, protect and hold harmless Bank and its officers, employees, and agents against: (a) all obligations, demands, claims, and liabilities claimed or

asserted by any other party in connection with the transactions contemplated by the Loan Documents; and (b) all losses or Bank Expenses in any way suffered, incurred, or paid by Bank as a result of or in any way arising out of, following, or consequential to transactions between Bank and Borrower whether under the Loan Documents, or otherwise (including without limitation reasonable attorneys fees and expenses), except for losses caused by Bank's gross negligence or willful misconduct.

12.3 Time of Essence. Time is of the essence for the performance of all obligations set forth in this Agreement.

12.4 Severability of Provisions. Each provision of this Agreement shall be severable from every other provision of this Agreement for the purpose of determining the legal enforceability of any specific provision.

12.5 Amendments in Writing, Integration. This Agreement cannot be amended or terminated except by a writing signed by Borrower and Bank. All prior agreements, understandings, representations warranties, and negotiations between the parties hereto with respect to the subject matter of this Agreement if any, are merged into this Agreement and the Loan Documents.

12.6 Counterparts. This Agreement may be executed in any number of counterparts and by different parties on separate counterparts, each of which, when executed and delivered, shall be deemed to be an original, and all of which, when taken together, shall constitute but one and the same Agreement.

12.7 Survival. All covenants, representations and warranties made in this Agreement shall continue in full force and effect so long as any Obligations remain outstanding. The obligations of Borrower to indemnify Bank with respect to the expenses, damages, losses, costs and liabilities described in Section 12.2 shall survive until all applicable statute of limitations periods with respect to actions that may be brought against Bank have run.

12.8 Effectiveness. This Agreement shall become effective only when it shall have been executed by Borrower and Bank (provided, however, in no event shall this Agreement become effective until signed by an officer of Bank in California).

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed as a sealed instrument as of the date first set forth above.

"Borrower"	"Bank"
SONUS NETWORKS, INC.	SILICON VALLEY BANK, doing business as SILICON VALLEY EAST
By: /s/ Rubin Gruber Rubin Gruber, President	By: /s/ Mark J. Pasculano, VP Mark J. Pasculano, VP
	SILICON VALLEY BANK
	By: /s/ Michelle Gianneni Title: AVP (Signed in Santa Clara County, California)

Exhibit 10.11

LOAN MODIFICATION AGREEMENT

This LOAN MODIFICATION AGREEMENT is entered into as of November 31, 1998, by and between SILICON VALLEY BANK, a California-chartered bank with its principal place of business at 3003 Tasman Drive, Santa Clara, CA 95054 and with a loan production office located at Wellesley Office Park, 40 William Street, Suite 350, Wellesley, MA 02481, doing business under the name "Silicon Valley East" ("Bank"), and SONUS NETWORKS, INC., a Delaware corporation with its principal place of business at 5 Carlisle Road, Westford, Massachusetts 01886 ("Borrower").

RECITALS

Borrower has borrowed money from Bank pursuant to certain Existing Loan Documents, as defined below. In consideration of certain financial accommodations from Bank, and Borrower's continuing obligations under the Existing Loan Documents, Borrower and Bank agree as follows:

AGREEMENT

1. DESCRIPTION OF EXISTING INDEBTEDNESS. Among other indebtedness which may be owing by Borrower to Bank, Borrower is indebted to Bank pursuant to, among other documents, a Loan and Security Agreement dated March 6. 1998 providing for an equipment line of credit in the maximum principal amount of ONE MILLION FIVE HUNDRED THOUSAND AND NO/100THS DOLLARS ($1,500,000) (the "Loan Agreement").

Hereinafter, all indebtedness owing by Borrower to Bank shall be referred to as the "Indebtedness."

2. DESCRIPTION OF COLLATERAL. Repayment of the Indebtedness is secured pursuant to the Loan Agreement. Hereinafter, the Loan Agreement, together with all other documents securing payment of the Indebtedness, shall be referred to as the "Existing Loan Documents."

3. DESCRIPTION OF CHANGES IN TERMS.

3.1 Modifications to Definitions. Section 1.1 of the Loan Agreement is hereby amended by substituting the following definitions for those set forth therein for the same terms, and in the case of new definitions, by adding those new definitions to that Section 1.1:

> "Advance" or "Advances" means a loan advance under the Committed Revolving Line.
>
> "Committed Revolving Line" means a credit extension of up to TWO HUNDRED THOUSAND AND NO/100THS Dollars ($200,000).
>
> "1998-2 Committed Equipment Line" means a credit extension of up to SEVEN HUNDRED FIFTY THOUSAND AND NO/100THS Dollars ($750,000); provided, however, that when and if (i) Bank receives Borrower's 1999 budget as approved by Borrower's Board of Directors, and (ii) Bank verifies, in its reasonable discretion, that the projections in that budget will be in compliance with Borrower's financial covenant set forth in Section 6.8 of this Agreement for all of calendar year 1999, then the 1998-2 Committed Equipment Line shall mean a credit extension of up to TWO MILLION AND NO/100THS Dollars ($2,000,000). Bank will notify Borrower of the results of its verification within ten (10) business days after receipt of Borrower's 1999 budget.
>
> "Credit Extension" means each Advance, Equipment Advance, Letter of Credit, or any other extension of credit by Bank for the benefit of Borrower hereunder.

"Equipment Advance" has the meaning set forth in Sections 2.1.1 and 2.1.2, as applicable.

"Letter of Credit" means a letter of credit or similar undertaking issued by Bank pursuant to Section 2.1.3.

"Letter of Credit Reserve" has the meaning set forth in Section 2.1.3.

"Maturity Date" means June 5, 2003.

"Revolving Maturity Date" means NOVEMBER 30, 1999.

3.2 Addition of 1998-2 Equipment Line. Section 2.1.2 is hereby added to the Loan Agreement as follows:

2.1.2 1998-2 Equipment Line.

(a) In addition to any Equipment Advances made pursuant to Section 2.1.1 of this Agreement, at any time from the date hereof through JUNE 30, 1999, Borrower may from time to time request advances from Bank in an aggregate amount not to exceed the lesser of the 1998-2 Committed Equipment Line or ONE MILLION FIVE HUNDRED THOUSAND AND NO/100THS DOLLARS ($1,500,000) to finance Equipment purchased after OCTOBER 1,1998 and prior to JULY 1, 1999.

(b) In addition to any Equipment Advances made pursuant to Section 2.1.1 of this Agreement, at any time after JUNE 30, 1999 through DECEMBER 31, 1999, Borrower may from time to time request advances from Bank in an aggregate amount not to exceed the 1998-2 Committed Equipment Line less any advances made under Section 2.1.2(a) of this Agreement, to finance Equipment purchased after JUNE 1, 1999 and prior to JANUARY 1, 2000.

(c) The advances under Sections 2.1.2(a) and 2.1.2(b) of this Agreement (each an "Equipment Advance" and collectively, the "Equipment Advances") shall not exceed ONE HUNDRED Percent (100%) of the invoice amount of such equipment approved from time to time by Bank, excluding taxes, shipping, warranty charges, freight discounts and installation expense. Software may, however, constitute up to FIFTY percent (50%) of aggregate Equipment Advances. In order to be eligible for financing under the 1998-2 Committed Equipment Line, invoices must be submitted to Bank for financing within sixty (60) days of invoice date.

(d) Interest shall accrue from the date of each Equipment Advance at the rate specified in Section 2.2(a), and shall be payable on the Payment Date of each month through the month in which the applicable Equipment Advance converts to a term loan as set forth in this Section 2.1.2(d). Any Equipment Advances made under Section 2.1.2(a) of this Agreement that are outstanding on JULY 1, 1999 will be payable in FORTY EIGHT (48) equal monthly installments of principal, plus all accrued interest, beginning on the Payment Date of each month commencing JULY 5, 1999 and with the last payment due on JUNE 5, 2003. Any Equipment Advances made under Section 2.1.2(b) of this Agreement that are outstanding on JANUARY 1, 2000 will be payable in FORTY TWO (42) equal monthly installments of principal, plus all accrued interest, beginning on the Payment Date of each month commencing JANUARY 5, 2000 and with the last payment due on JUNE 5, 2003. Equipment Advances may be prepaid without penalty. Equipment Advances, once repaid, may not be reborrowed.

(e) When Borrower desires to obtain an Equipment Advance under this Section 2.1.2, Borrower shall notify Bank (which notice shall be irrevocable) by facsimile transmission to be received no later than 3:00 p.m. Pacific time one (1) Business Day before the day on which the Equipment Advance is to be made. Such notice shall be substantially in the form of Exhibit B. The notice shall be signed by a Responsible Officer or its designee and include a copy of the invoice(s) for the Equipment to be financed.

3.3 Addition of Committed Revolving Line. Section 2.1.3 is hereby added to the Loan Agreement as follows:

2.1.3 Advances for Letters of Credit.

(a) Subject to the terms and conditions of this Agreement, Bank agrees to issue or cause to be issued Letters of Credit for the account of Borrower in an aggregate outstanding face amount not to exceed the Committed Revolving Line. Borrower's Letter of Credit reimbursement obligation shall be secured by cash on terms acceptable to Bank at any time after the Revolving Maturity Date if the term of this Agreement is not extended by Bank. All Letters of Credit shall be in form and substance reasonably acceptable to Bank in its discretion and shall be subject to the terms and conditions of Bank's form of standard Application and Letter of Credit Agreement.

(b) Borrower shall pay to Bank a one-time Facility Fee equal to ONE PERCENT (1.0%), of the face amount of each Letter of Credit when issued, which fee shall be fully earned and non-refundable upon such issuance.

(c) The obligation of Borrower to immediately reimburse Bank for drawings made under Letters of Credit shall be absolute, unconditional and irrevocable, and shall be performed strictly in accordance with the terms of this Agreement and such Letters of Credit, under all circumstances whatsoever. Borrower shall indemnify, defend, protect and hold Bank harmless from any loss, cost, expense or liability, including, without limitation, reasonable attorneys' fees, arising out of or in connection with any Letters of Credit.

(d) Borrower may request that Bank issue a Letter of Credit payable in a currency other than United States Dollars. If a demand for payment is made under any such Letter of Credit, Bank shall treat such demand as an Advance to Borrower of the equivalent of the amount thereof (plus cable charges) in United States currency at the then prevailing rate of exchange in San Francisco, California, for sales of that other currency for cable transfer to the country of which it is the currency.

(e) Upon the issuance of any Letter of Credit payable in a currency other than United States Dollars, Bank shall create a reserve under the Committed Revolving Line for letters of credit against fluctuations in currency exchange rates, in an amount equal to ten percent (10%) of the face amount of such Letter of Credit (the "Letter of Credit Reserve"). The amount of such Letter of Credit Reserve may be amended by Bank from time to time to account for fluctuations in the exchange rate. The availability of funds under the Committed Revolving Line shall be reduced by the amount of such Letter of Credit Reserve for so long as such Letter of Credit remains outstanding.

(f) The Committed Revolving Line shall terminate on the Revolving Maturity Date, at which time all Advances under this Section 2.1.3 and

other amounts due under this Agreement (except as otherwise expressly specified herein, including without limitation payments due under Sections 2.1.1 and 2.1.2 of this Agreement) shall be immediately due and payable.

3.4 Modifications to Interest Rates. Section 2.2(a) of the Loan Agreement is hereby replaced in its entirety with the following:

(a) Interest Rate. Except as set forth in Section 2.2(b), any Equipment Advances shall bear interest, on the average daily balance thereof, at a per annum rate equal to ONE-HALF (0.50) percentage points above the Prime Rate and any Advances shall bear interest, on the average daily balance thereof, at a per annum rate equal to the Prime Rate.

3.5 Modifications to Tangible Net Worth Covenant. Section 6.8 of the Loan Agreement is hereby replaced in its entirety with the following:

6.8 Tangible Net Worth. Borrower shall maintain, as of the last day of each calendar month a Tangible Net Worth of not less than the total of the outstanding principal amount of Equipment Advances, plus all accrued and unpaid interest arising from Equipment Advances plus TWO HUNDRED THOUSAND AND NO/100THS Dollars ($200,000).

3.6 Modifications to Compliance Certificate. Exhibit C of the Loan Agreement is hereby replaced in its entirety with Exhibit C to this Agreement.

4. CONSISTENT CHANGES. The Existing Loan Documents are hereby amended wherever necessary to reflect the changes described in this Loan Modification Agreement.

5. NO DEFENSES OF BORROWER. Borrower agrees that as of this date, it has no defenses against any of the obligations to pay any amounts under the Indebtedness.

6. CONTINUING VALIDITY. Borrower understands and agrees that (i) in modifying the Existing Loan Documents, Bank is relying upon Borrower's representations, warranties and agreements, as set forth in the Existing Loan Documents, (ii) except as expressly modified pursuant to this Loan Modification Agreement (including the effects of Section 4 hereof), the Existing Loan Documents remain unchanged and in full force and effect, (iii) Bank's agreement to modify the Existing Loan Documents pursuant to this Loan Modification Agreement shall in no way obligate Bank to make any future modifications to the Existing Loan Documents, (iv) it is the intention of Bank and Borrower to retain as liable parties all makers and endorsers of the Existing Loan Documents, unless a party is expressly released by Bank in writing, (v) no maker, endorser or guarantor will be released by virtue of this Loan Modification Agreement, and (vi) the terms of this Section 6 apply not only to this Loan Modification Agreement but also to all subsequent loan modification agreements, if any.

7. CHOICE OF LAW AND VENUE; JURY TRIAL WAIVER. The laws of the Commonwealth of Massachusetts shall apply to this Agreement. BORROWER ACCEPTS FOR ITSELF AND IN CONNECTION WITH ITS PROPERTIES, UNCONDITIONALLY, THE NON-EXCLUSIVE JURISDICTION OF ANY STATE OR FEDERAL COURT OF COMPETENT JURISDICTION IN THE COMMONWEALTH OF MASSACHUSETTS IN ANY ACTION, SUIT, OR PROCEEDING OF ANY KIND AGAINST IT WHICH ARISES OUT OF OR BY REASON OF THIS AGREEMENT; PROVIDED, HOWEVER, THAT IF FOR ANY REASON BANK CANNOT AVAIL ITSELF OF THE COURTS OF THE COMMONWEALTH OF MASSACHUSETTS, BORROWER ACCEPTS JURISDICTION OF THE COURTS AND VENUE IN SANTA CLARA COUNTY, CALIFORNIA. BORROWER AND BANK EACH HEREBY WAIVE THEIR RESPECTIVE RIGHTS TO A JURY TRIAL OF ANY CLAIM OR CAUSE OF ACTION BASED UPON OR ARISING OUT OF ANY OF THE LOAN DOCUMENTS OR ANY OF THE TRANSACTIONS CONTEMPLATED THEREIN, INCLUDING CONTRACT CLAIMS, TORT CLAIMS, BREACH OF DUTY CLAIMS, AND ALL OTHER COMMON LAW OR STATUTORY CLAIMS. EACH PARTY RECOGNIZES AND AGREES THAT THE FOREGOING WAIVER CONSTITUTES A MATERIAL INDUCEMENT FOR IT TO ENTER INTO THIS

AGREEMENT. EACH PARTY REPRESENTS AND WARRANTS THAT IT HAS REVIEWED THIS WAIVER WITH ITS LEGAL COUNSEL AND THAT IT KNOWINGLY AND VOLUNTARILY WAIVES ITS JURY TRIAL RIGHTS FOLLOWING CONSULTATION WITH LEGAL COUNSEL.

8. EFFECTIVENESS. This Agreement shall become effective only when it shall have been executed by Borrower and Bank (provided, however, in no event shall this Agreement become effective until signed by an officer of Bank in California).

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed as a sealed instrument as of the date first set forth above.

"Borrower"	"Bank"
SONUS NETWORKS, INC.	SILICON VALLEY BANK, doing business as SILICON VALLEY EAST
By: /s/ Rubin Gruber Rubin Gruber, President	By: Mark J. Pasculano, VP
	SILICON VALLEY BANK
	By:
	Title:
	(Signed in Santa Clara County, California)

Exhibit 10.12

LOAN MODIFICATION AGREEMENT

This LOAN MODIFICATION AGREEMENT Is entered into as of November 29, 1999, by and between SILICON VALLEY BANK, a California-chartered bank with its principal place of business at 3003 Tasman Drive, Santa Clara, CA 95054 and with a loan production office located at Wellesley Office Park, 40 William Street, Suite 350, Wellesley, MA 02481, doing business under the name "Silicon Valley East" ("Bank"), and SONUS NETWORKS, INC., a Delaware corporation with its principal place of business at 5 Carlisle Road, Westford, Massachusetts 01886 ("Borrower").

RECITALS

Borrower has borrowed money from Bank pursuant to certain Existing Loan Documents, as defined below. In consideration of certain financial accommodations from Bank, and Borrower's continuing obligations under the Existing Loan Documents, Borrower and Bank agree as follows:

AGREEMENT

1. DESCRIPTION OF EXISTING INDEBTEDNESS. Among other indebtedness which may be owing by Borrower to Bank, Borrower is indebted to Bank pursuant to, among other documents, a Loan and Security Agreement dated March 6,1998, as amended by a Loan Modification Agreement dated as of November 30,1998, providing for equipment lines of credit up to a maximum aggregate principal amount of THREE MILLION FIVE HUNDRED THOUSAND AND NO/100THS DOLLARS ($3,500,000) and a revolving line of credit for Letters of Credit of up to a maximum principal amount of TWO HUNDRED THOUSAND AND NO/100THS DOLLARS ($200,000) (the "Loan Agreement").

Hereinafter, all Indebtedness owing by Borrower to Bank shall be referred to as the "Indebtedness."

2. DESCRIPTION OF COLLATERAL. Repayment of the Indebtedness is secured pursuant to the Loan Agreement. Hereinafter, the Loan Agreement, together with all other documents securing payment of the Indebtedness, shall be referred to as the "Existing Loan Documents."

3. DESCRIPTION OF CHANGES IN TERMS.

3.1 Modifications to Definitions. Section 1.1 of the Loan Agreement is hereby amended by substituting the following definitions for those set forth therein for the same terms, and in the case of new definitions, by adding those new definitions to that Section 1.1:

> "1999 Committed Equipment Line" means a credit extension of up to THREE MILLION FIVE HUNDRED THOUSAND AND NO/100THS Dollars ($3,500,000).
>
> "Equipment Advance" has the meaning set forth in Sections 2.1.1, 2.1.2 and 2.1.4, as applicable.
>
> "Maturity Date" means December 5, 2003.

3.2 Addition of 1999 Equipment Line. Section 2.1.4 is hereby added to the Loan Agreement as follows:

> 2.1.4 1999 Committed Equipment Line.
>
> (a) in addition to any Equipment Advances made pursuant to Sections 2.1.1 and 2.1.2 of this Agreement, at any time after November 29, 1999 and before JANUARY 1, 2000, Borrower may from time to time request advances from Bank in an aggregate amount not to exceed the

lesser of the 1999 Committed Equipment Line or TWO MILLION FIVE HUNDRED THOUSAND AND NO/100THS DOLLARS ($2,500,000) to finance Equipment purchased after JUNE 30, 1999 end prior to JANUARY 1, 2000.

(b) In addition to any Equipment Advances made pursuant to Sections 2.1.1 and 2.1.2 of this Agreement, at any time after DECEMBER 31, 1999 and before JULY 1, 2000, Borrower may from time to time request advances from Bank in an aggregate amount not to exceed the 1999 Committed Equipment Line less any advances made under Section 2.1.4(a) of this Agreement, to finance Equipment purchased after OCTOBER 31,1999 and prior to JULY 1, 2000.

(c) The advances under Sections 2.1.4(a) and 2.1.4(b) of this Agreement (each an "Equipment Advance" and collectively, the "Equipment Advances") shall not exceed ONE HUNDRED Percent (100%) of the invoice amount of such equipment approved from time to time by Bank, excluding taxes, shipping, warranty charges, freight discounts and installation expense. Software may, however, constitute up to FIFTY percent (50%) of aggregate Equipment Advances. In order to be eligible for financing under the 1999 Committed Equipment Line, invoices must be submitted to Bank for financing within sixty (60) days of invoice date; provided, however, that Borrower's initial Equipment Advance under the 1999 Committed Equipment Line, if made on or before December 29, 1999, may be used to finance equipment purchased after JUNE 30, 1999 but more than 60 days after invoice date.

(d) Interest shall accrue from the date of each Equipment Advance at the rate specified in Section 2.2(a), and shall be payable on the Payment Date of each month through the month in which the applicable Equipment Advance converts to a term loan as set forth in this Section 2.1.4(d). Any Equipment Advances made under Section 2.1.4(a) of this Agreement that are outstanding on JANUARY 1, 2000 will be payable in FORTY EIGHT (48) equal monthly installments of principal, plus all accrued interest, beginning on the Payment Date of each month commencing JANUARY 5, 2000 and ending with the last payment due on DECEMBER 5, 2003. Any Equipment Advances made under Section 2.1.4(b) of this Agreement that are outstanding on JULY 1, 2000 will be payable in FORTY TWO (42) equal monthly installments of principal, plus all accrued interest, beginning on the Payment Date of each month commencing JULY 5, 2000 and ending with the last payment due on DECEMBER 5, 2003. Equipment Advances may be prepaid without penalty. Equipment Advances, once repaid, may not be reborrowed.

(e) When Borrower desires to obtain an Equipment Advance under this Section 2.1.4, Borrower shall notify Bank (which notice shall be irrevocable) by facsimile transmission to be received no later than 3:00 p.m. East Coast time at least one (1) Business Day before the day on which the Equipment Advance is to be made. Such notice shall be substantially in the form of Exhibit B. The notice shall be signed by a Responsible Officer or its designee and include a copy of the invoice(s) for the Equipment to be financed.

3.3 Modifications to Tangible Net Worth Covenant. Section 6.8 of the Loan Agreement is hereby replaced In Its entirety with the following:

> 6.8 Tangible Net Worth. Borrower shall maintain, as of the last day of each calendar month, a Tangible Net Worth of not less than the total outstanding principal and accrued interest under all credit facilities from Bank to Borrower plus TWO HUNDRED THOUSAND AND NO/100THS Dollars ($200,000).

3.4 Addition of Adjusted Quick Ratio Covenant. Section 6.10 is hereby added to the Loan Agreement as follows:

> 6.10 Adjusted Quick Ratio. Borrower shall maintain, as of the last day of each calendar month, a ratio of Quick Assets to Current Liabilities of at least 1.5 to 1.0.

3.5 Modifications to Compliance Certificate. Exhibit C of the Loan Agreement is hereby replaced in its entirety with Exhibit C to this Agreement.

4. FACILITY FEE. Borrower shall pay to Bank any out-of-pocket expenses incurred by the Bank through the date hereof, including reasonable attorneys' fees end expenses, and after the date hereof, all Bank Expenses, including reasonable attorneys' fees and expenses, as and when they become due.

5. CONDITIONS PRECEDENT TO FURTHER ADVANCES. The obligation of Bank to make further advances to Borrower is subject to the condition precedent that Bank shall have received, in form and substance satisfactory to Bank the following:

(a) this Loan Modification Agreement duly executed by Borrower;

(b) payment of the fees and Bank Expenses then due specified in Section 4 hereof; and

(c) such other documents, and completion of such other matters, as Bank may reasonably deem necessary or appropriate.

6. CONSISTENT CHANGES. The Existing Loan Documents are hereby amended wherever necessary to reflect the changes described in this Loan Modification Agreement

7. NO DEFENSES OF BORROWER. Borrower agrees that as of this date, It has no defenses against any of the obligations to pay any amounts under the Indebtedness.

8. CONTINUING VALIDITY. Borrower understands and agrees that (i) in modifying the Existing Loan Documents, Bank is relying upon Borrower's representations, warranties and agreements, as set forth in the Existing Loan Documents, (ii) except as expressly modified pursuant to this Loan Modification Agreement (including the effects of Section 6 hereof), the Existing Loan Documents remain unchanged and in full force and effect, (iii) Bank's agreement to modify the Existing Loan Documents pursuant to this Loan Modification Agreement shall in no way obligate Bank to make any future modifications to the Existing Loan Documents, (iv) it is the intention of Bank and Borrower to retain as liable parties all makers and endorsers of the Existing Loan Documents, unless a party is expressly released by Bank in writing, (v) no maker, endorser or guarantor will be released by virtue of this Loan Modification Agreement, and (vi) the terms of this Section 8 apply not only to this Loan Modification Agreement but also to all subsequent loan modification agreements, if any.

9. CHOICE OF LAW AND VENUE; JURY TRIAL WAIVER. The laws of the Commonwealth of Massachusetts shall apply to this Agreement. BORROWER ACCEPTS FOR ITSELF AND IN

CONNECTION WITH ITS PROPERTIES, UNCONDITIONALLY, THE NON-EXCLUSIVE JURISDICTION OF ANY STATE OR FEDERAL COURT OF COMPETENT JURISDICTION IN THE COMMONWEALTH OF MASSACHUSETTS IN ANY ACTION, SUIT, OR PROCEEDING OF ANY KIND AGAINST IT WHICH ARISES OUT OF OR BY REASON OF THIS AGREEMENT; PROVIDED, HOWEVER, THAT IF FOR ANY REASON BANK CANNOT AVAIL ITSELF OF THE COURTS OF THE COMMONWEALTH OF MASSACHUSETTS, BORROWER ACCEPTS JURISDICTION OF THE COURTS AND VENUE IN SANTA CLARA COUNTY, CALIFORNIA. BORROWER AND BANK EACH HEREBY WAIVE THEIR RESPECTIVE RIGHTS TO A JURY TRIAL OF ANY CLAIM OR CAUSE OF ACTION BASED UPON OR ARISING OUT OF ANY OF THE LOAN DOCUMENTS OR ANY OF THE TRANSACTIONS CONTEMPLATED THEREIN, INCLUDING CONTRACT CLAIMS, TORT CLAIMS, BREACH OF DUTY CLAIMS, AND ALL OTHER COMMON LAW OR STATUTORY CLAIMS. EACH PARTY RECOGNIZES AND AGREES THAT THE FOREGOING WAIVER CONSTITUTES A MATERIAL INDUCEMENT FOR IT TO ENTER INTO THIS AGREEMENT. EACH PARTY REPRESENTS AND WARRANTS THAT IT HAS REVIEWED THIS WAIVER WITH ITS LEGAL COUNSEL AND THAT IT KNOWINGLY AND VOLUNTARILY WAIVES ITS JURY TRIAL RIGHTS FOLLOWING CONSULTATION WITH LEGAL COUNSEL.

10. EFFECTIVENESS. This Agreement shall become effective only when it shall have been executed by Borrower and Bank (provided, however, in no event shall this Agreement become effective until signed by an officer of Bank in California).

IN WITNESS WHEREOF, the parties hereto have caused this Loan Modification Agreement to be executed as a sealed instrument as of the date first set forth above.

"Borrower"	"Bank"
SONUS NETWORKS, INC.	SILICON VALLEY BANK, doing business as SILICON VALLEY EAST
By: /s/ Hassan Ahmed Hassan Ahmed, President	By:
	SILICON VALLEY BANK
	By:
	Title:
	(Signed in Santa Clara County, California)

EXHIBIT C FOLLOWS

EXHIBIT 23.1

CONSENT OF INDEPENDENT PUBLIC ACCOUNTANTS

As independent public accountants, we hereby consent to the use of our report dated March 10, 2000 (and to all references to our Firm) included in or made a part of this Registration Statement.

/s/ Arthur Andersen LLP
ARTHUR ANDERSEN LLP

Boston, Massachusetts
March 10, 2000

THIS SCHEDULE CONTAINS SUMMARY FINANCIAL INFORMATION EXTRACTED FROM
(IDENTIFY SPECIFIC FINANCIAL STATEMENTS HERE) _____
_____
_____
AND IS QUALIFIED IN ITS ENTIRETY BY REFERENCE TO SUCH FINANCIAL STATEMENTS.

YEAR	
	DEC-31-1999
	JAN-01-1999
	DEC-31-1999
	8,885
	14,681
	0
	0
	2,210
	26,074
	6,075
	1,806
	30,782
	6,470
	3,402
	48,609
	0
	22
	661
	30,782
	0
	0
	0
	20,119
	4,255
	0
	224
	(23,887)
	0
	(23,887)
	0
	0
	0
	(23,887)
	5.53
	5.53